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**UTILITY PATENT APPLICATION TRANSMITTAL**  
**(Only for new nonprovisional applications under 37 CFR 1.53(b))**

Docket No. : PSTM0020/MRK/STM  
Inventor(s) : Paul Bilibin, et al.  
Title : APPARATUS, SYSTEMS AND METHODS FOR ONLINE, MULTI-CARRIER,  
MULTI-SERVICE PARCEL SHIPPING MANAGEMENT DETERMINATION OF  
RATABLE WEIGHT FOR MULTIPLE CARRIERS

Express Mail Label No. : EK623102636US

**ADDRESS TO:** Assistant Commissioner for Patents  
Box Patent Application  
Washington, D.C. 20231

Date: October 6, 2000

**1. X FEE TRANSMITTAL FORM** *(Submit an original, and a duplicate for fee processing).*

## 2. IF A CONTINUING APPLICATION

This application is a of patent application No. .

Prior application information: Examiner : Group Art Unit:

X This application claims priority pursuant to 35 U.S.C. § 119(e) and 37 CFR § 1.78(a)(4), to provisional Application No. 60/158,179, Filing Date October 6, 2000; Application No. 60/170,186, Filing Date December 10, 1999; Application No. 60/170,504, Filing Date December 13, 1999; Application No. 60/192,692, Filing Date March 28, 2000; Application No. 60/192,723, Filing Date March 27, 2000; Application No. 60/193,899, Filing Date March 31, 2000; and Application No. 60/195,748, Filing Date April 6, 2000.

### 3. APPLICATION COMPRISED OF

## Specification

116 Specification, claims and Abstract (total pages)

## Drawings

92 Sheets of drawing(s) (FIGS. 1 to 92)

## Declaration and Power of Attorney

Newly executed

X	Unexecuted declaration
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Copy from a prior application (37 CFR 1.63(d))(for continuation and divisional)

#### 4. Microfiche Computer Program (Appendix)

**5. Nucleotide and/or Amino Acid Sequence Submission** (*if applicable, all necessary*)

Computer Readable Copy

Paper Copy (identical to computer copy)

Statement verifying identity of above copies

**6. ALSO ENCLOSED ARE**

## Preliminary Amendment

A Petition for Extension of Time for the parent application and the required fee are enclosed as separate

**UTILITY PATENT APPLICATION TRANSMITTAL**  
**(Only for new nonprovisional applications under 37 CFR 1.53(b))**

Docket No. : PSTM0020/MRK/STM

- \_\_\_\_\_ papers
- \_\_\_\_\_ Small Entity Statement(s)
- \_\_\_\_\_ Statement filed in parent application, status still proper and desired
- \_\_\_\_\_ Copy of Statement filed in provisional application, status still proper and desired
- \_\_\_\_\_ An Assignment of the invention with the Recordation Cover Sheet and the recordation fee are enclosed as separate papers
- \_\_\_\_\_ This application is owned by pursuant to an Assignment recorded at Reel , Frame
- \_\_\_\_\_ Information Disclosure Statement (IDS)/PTO-1449
- \_\_\_\_\_ Copies of IDS Citations
- \_\_\_\_\_ Certified copy of Priority Document(s) (*if foreign priority is claimed*)
- \_\_\_\_\_ English Translation Document (*if applicable*)
- X   Return Receipt Postcard (MPEP 503) (should be specifically itemized).
- \_\_\_\_\_ Other

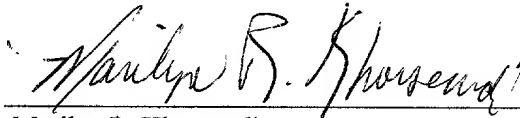
**7. CORRESPONDENCE ADDRESS**

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Respectfully submitted,

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003007 " 2058950

**FEE TRANSMITTAL  
UTILITY PATENT APPLICATION**

jc853 U.S. PTO  
09/685077



**DATE: October 6, 2000**

Docket No. : PSTM0020/MRK/STM  
Inventor(s) : Paul Bilibin, et al.  
Title : APPARATUS, SYSTEMS AND METHODS FOR ONLINE, MULTI-CARRIER, MULTI-SERVICE PARCEL SHIPPING MANAGEMENT DETERMINATION OF RATABLE WEIGHT FOR MULTIPLE CARRIERS

**FEE DETERMINATION**

CLAIMS AS FILED					
	NUMBER FILED	NUMBER EXTRA	SMALL ENTITY RATE	LARGE ENTITY RATE	FEE
TOTAL CLAIMS	57- 20	= 37	x \$9.00	37 x \$18.00	666.00
INDEPENDENT CLAIMS	21- 3	= 18	x \$40.00	18 x \$80.00	1440.00
MULTIPLE-DEPENDENT CLAIMS FEE			\$135.00	\$270.00	
BASIC FEE			\$355.00	\$710.00	710.00
TOTAL FILING FEE					\$26816.00
List Independent Claims: 1, 2, 3, 8, 9, 10, 15, 16, 17, 22, 23, 24, 29, 30, 31, 36, 37, 38, 43, 48 and 53					

**METHOD OF PAYMENT**

☒ No Payment Enclosed

Respectfully submitted,

KHORSANDI PATENT LAW GROUP, ALC.

By Marilyn R. Khorsandi

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PSTM0020/MRK/STM

1 APPARATUS, SYSTEMS AND METHODS FOR ONLINE, MULTI-CARRIER, MULTI-  
2 SERVICE PARCEL SHIPPING MANAGEMENT DETERMINATION OF RATABLE  
3 WEIGHT FOR MULTIPLE CARRIERS  
4

5 CROSS REFERENCE TO RELATED APPLICATIONS

6 This application claims priority of U.S. Provisional Patent Application Serial No.  
7 60/158,179, filed on October 6, 1999, U.S. Provisional Patent Application Serial No.  
8 60/170,186, filed on December 10, 1999, U.S. Provisional Patent Application Serial No.  
9 60/170,504, filed on December 13, 1999, U.S. Provisional Patent Application Serial  
10 No.60/192,692, filed on March 28, 2000, U.S. Provisional Patent Application Serial No.  
11 60/192,723, filed on March 27, 2000, U.S. Provisional Patent Application Serial No.  
12 60/193,899, filed on March 31, 2000, and U.S. Provisional Patent Application Serial No.  
13 60/195,748, filed on April 6, 2000. The disclosures of U.S. Provisional Patent Application  
14 Serial No. 60/158,179, filed on October 6, 1999, U.S. Provisional Patent Application Serial  
15 No. 60/170,186, filed on December 10, 1999, U.S. Provisional Patent Application Serial No.  
16 60/170,504, filed on December 13, 1999, are incorporated for all purposes herein by reference  
17 as if fully stated here.  
18

19 FIELD OF THE INVENTION

20 The field of the present invention is computer systems, and specifically computer  
21 systems for parcel shipping management.  
22

23 BACKGROUND OF THE INVENTION

24 Individuals, small businesses and major corporations the ("Shipper(s)") ship billions  
25 of parcels every year (small office/home office shippers are referred to as "SOHO" Shippers).  
26 Each parcel, also sometimes referred to herein as a package, is shipped by a Shipper using at  
27 least one parcel carrier (the "carrier(s)", or "Carrier(s)").

28 Each parcel is characterized by a set of "Parcel Specifications. " Parcel specifications  
29 include but are not limited to such factors as: parcel dimensions, parcel weight, parcel value,  
30 parcel value and the like.





each of the plurality of Carriers.

Another problem in dealing with standalone Carrier systems is that in order for a Shipper to compare services and pricing for shipping a single parcel with multiple Carriers, the Shipper must apply each Carrier's rules for determining a "Billable weight" to the physical dimensions, dimensional weight, and actual weight of a particular parcel. Because each Carrier may limit shipping to parcels that do not exceed certain physical characteristics, the Shipper must determine whether each of the plurality of Carriers supports shipping the particular package. For those Carriers that support shipping the particular parcel, the Shipper must apply the Carrier's parcel shipment pricing rules to the Billable weight of the particular parcel and to other factors regarding the Shipper's shipping requirements in order to determine a price that each Carrier would charge for shipping the particular parcel. Accordingly, some way is needed so that a Shipper can accurately and easily determine the Billable weight of a particular parcel for each of a plurality of Carriers and the shipping rate for each of a plurality of services offered by each of the plurality of Carriers.

#### SUMMARY OF THE INVENTION

The present invention provides apparatus, systems and methods that apply, in response to a request by any particular user of a plurality of users, each Carrier's rules for determining a ratable weight, including calculating a "dimensional weight" according to physical dimensions and weight of a particular parcel, and determining a "billable weight" according to physical dimensions, dimensional weight and actual weight of a particular parcel. The present invention provides apparatus, systems and methods that determine, in response to a request by any particular user of a plurality of users, whether each of the plurality of Carriers supports shipping the particular package. For each of the Carriers that support shipping the particular parcel, the present invention applies the Carrier's parcel shipment pricing rules to the ratable weight of the particular parcel and to other factors regarding the Shipper's shipping requirements in order to determine a price that each Carrier would charge for shipping the particular parcel.

The present invention provides apparatus, systems and methods that apply, in response to a request by any particular user of a plurality of users, each Carrier's rules for

1 calculating a “dimensional weight” according to physical dimensions and weight of a  
2 particular parcel. The present invention provides apparatus, systems and methods that  
3 determine, in response to a request by any particular user of a plurality of users, whether each  
4 of the plurality of Carriers supports shipping the particular package. For each of the Carriers  
5 that support shipping the particular parcel, the present invention applies the Carrier’s parcel  
6 shipment pricing rules to the dimensional weight of the particular parcel and to other factors  
7 regarding the Shipper’s shipping requirements in order to determine a price that each Carrier  
8 would charge for shipping the particular parcel.

9 Each user accesses the present invention over a global communications network using  
10 a client computer device, wherein each user client computer device has an individual  
11 electronic connection to the global communications network.

12 The present invention applies, for each particular parcel, each Carrier’s dimensional  
13 weight rules to the parcel specifications for the particular parcel and calculates a dimensional  
14 weight for the particular parcel according to each Carrier’s dimensional weight rules.

15 The present invention then compares the calculated dimensional weight for the  
16 particular parcel to dimensional weight limitations imposed by each Carrier.

17 For each of the Carriers for which the calculated dimensional weight does not exceed  
18 dimensional weight limitations imposed by the particular Carrier, the present invention  
19 calculates for each of a plurality of services offered by the particular Carrier a shipping rate  
20 for shipping the particular parcel according to a set of parcel shipping pricing rules for each  
21 particular service offered by the particular Carrier as applied to the set of parcel specifications  
22 for the particular parcel and to the origin zip code and destination zip code input by the  
23 particular user.

24 The present invention generates an online comparison display to a display monitor  
25 configured with the client computer device of the particular user of shipping rates for  
26 shipping the particular parcel using the services provided by the Carriers for which the  
27 calculated dimensional weight does not exceed dimensional weight limitations imposed by  
28 the particular Carrier.

29 The present invention provides apparatus, systems and methods that apply, in  
30 response to a request by any particular user of a plurality of users, each Carrier’s rules for

determining a “Billable weight” according to the physical dimensions, dimensional weight and actual weight of a particular parcel. The present invention provides apparatus, systems and methods that determine, in response to a request by any particular user of a plurality of users, whether each of the plurality of Carriers supports shipping the particular package. For each service offered by each of the Carriers that support shipping the particular parcel, the present invention applies the parcel shipment pricing rules for the particular service to the Billable weight of the particular parcel and to other factors regarding the Shipper’s shipping requirements in order to determine a price that each Carrier would charge for shipping the particular parcel.

Each user accesses the present invention over a global communications network using a client computer device, wherein each user client computer device has an individual electronic connection to the global communications network.

The present invention applies, for each particular parcel, each Carrier’s acceptable parcel characteristics rules to the parcel specifications and dimensional weight for the particular parcel and determines whether the particular Carrier supports shipping of the particular parcel, and if so, a Billable weight for the particular parcel according to each Carrier’s Billable weight rules.

For each of the Carriers that support shipping the particular parcel, the present invention calculates for each of a plurality of services offered by the particular supporting Carrier a shipping rate for shipping the particular parcel according to a set of parcel shipping pricing rules for the particular service as applied to the set of parcel specifications and Billable weight for the particular parcel and to an origin zip code and a destination zip code input by the particular user.

The present invention generates an online comparison display to a display monitor configured with the client computer device of the particular user of the calculated shipping rates for shipping the particular parcel for each of the services provided by the supporting Carriers.

1 BRIEF DESCRIPTION OF THE DRAWINGS

2 These and other features of the present invention are more fully set forth in the  
3 following description of exemplary embodiments of the invention. The description is  
4 presented with reference to the accompanying drawings in which:

5 FIG. 1 is an entity relationship diagram depicting the interface relationships provided  
6 by the System between Shippers as Sellers, Carriers, Recipients as Buyers,  
7 eCommerce/eAuction Providers and the System in an exemplary embodiment of the System  
8 in an independent system eCommerce environment;

9 FIG. 2 is an entity relationship diagram depicting the interface relationships provided  
10 by the System between Shippers, Carriers, Recipients and the System in an exemplary  
11 embodiment of the System in an Internet environment;

12 FIG. 3 is a graphic representation depicting an exemplary user computer configuration  
13 and the user computer's interface with the System in an Internet environment;

14 FIG. 4 is a simplified schematic diagram of a user's computer and the interface  
15 between the user's computer and the System servers using the Internet in an exemplary  
16 embodiment of the invention in an Internet environment;

17 FIG. 5 is a simplified graphic representation of an exemplary configuration of the  
18 System, and relationships between the System and Carriers and Users, in an exemplary  
19 embodiment of the System in an independent system eCommerce environment;

20 FIG. 6 is a simplified graphic representation depicting an alternate view of the System  
21 Data Center and its interfaces in an exemplary embodiment of the System in an independent  
22 system eCommerce environment;

23 FIG. 7 is a simplified graphic representation of an exemplary configuration of the  
24 System, and relationships between the System and Carriers and Shippers/Users, in an  
25 exemplary simplified Internet embodiment of the invention;

26 FIG. 8 is a high level System component diagram depicting an exemplary System  
27 Architecture in an exemplary embodiment of the System in an Internet environment;

28 FIG. 9 is a graphic representation of an exemplary menu architecture for the System in  
29 an exemplary embodiment of the System in an independent system eCommerce environment;

30 FIGS. 10a through 10e are high level logic flow diagrams depicting the logic flow for

1 processing both Shipper/Seller and Buyer/Bidder information in an exemplary embodiment of  
2 the System in an independent system eCommerce environment;

3 FIG. 11 is a graphic representation depicting an exemplary embodiment of a  
4 registration introduction screen in an exemplary embodiment of the System in an independent  
5 system eCommerce environment;

6 FIG. 12 is a graphic representation depicting an exemplary embodiment of a User  
7 address collection screen in an exemplary embodiment of the System in an independent  
8 system eCommerce environment;

9 FIG. 13 is a graphic representation of an exemplary embodiment of a Shipping  
10 Location screen in an exemplary embodiment of the System in an independent system  
11 eCommerce environment;

12 FIG. 14 is a graphic representation depicting an exemplary embodiment of a Locations  
13 screen in an exemplary embodiment of the System in an independent system eCommerce  
14 environment;

15 FIG. 15 is a graphic representation depicting an alternative exemplary embodiment of  
16 a Locations screen inset in an alternative exemplary embodiment of the System in an Internet  
17 environment;

18 FIG. 16 is a graphic representation of an exemplary embodiment of a UPS registration  
19 screen in an exemplary embodiment of the System in an independent system eCommerce  
20 environment;

21 FIG. 17 is a graphic representation of an exemplary embodiment of an eCommerce  
22 registration introduction screen in an exemplary embodiment of the System in an independent  
23 system eCommerce environment;

24 FIG. 18 is a graphic representation of a registration complete screen in an exemplary  
25 embodiment of the System in an independent system eCommerce environment;

26 FIG. 19 is a graphic representation of an exemplary embodiment of the Seller's  
27 Carrier/Service Preferences Screen in an exemplary embodiment of the System in an  
28 independent system eCommerce environment;

29 FIG. 20 is a graphic representation of an alternative embodiment of the Seller's  
30 Carrier/Service Preferences Screen in an exemplary embodiment of the System in an

independent system eCommerce environment;

FIG. 21 is a graphic representation of an exemplary embodiment of a Seller's Charges and Payment Preferences Screen in an exemplary embodiment of the System in an independent system eCommerce environment;

FIG. 22 is a graphic representation of an alternative embodiment of the Seller's Charges and Payment Preferences Screen in an exemplary embodiment of the System in an independent system eCommerce environment;

FIG. 23 is a System interactivity data and logic flow diagram depicting an exemplary embodiment of the Seller's eCommerce Registration process in an exemplary embodiment of the System in an independent system eCommerce environment;

FIG. 24 is a graphic representation of a Registration Needs Completion Screen in an exemplary embodiment of the System in an independent system eCommerce environment;

FIG. 25 is a graphic representation of an exemplary embodiment of a Create a Seller's Link Screen in an exemplary embodiment of the System in an independent system eCommerce environment;

FIG. 26 is a graphic representation of an alternative online screen that collects a user's shipping specifications and preferences in an alternative exemplary embodiment of the System in an Internet environment;

FIGS. 27a through 27c are high level logic flow diagrams control communications with client machine peripheral devices in an exemplary embodiment of the System in an Internet environment;

FIG. 28 is a graphic representation of an alternative online screen that collects supplemental user shipping specifications and preferences in an alternative exemplary embodiment of the System in an Internet environment;

FIG. 29 is a graphic representation of an alternative embodiment of a Create a Seller's Link Screen in an exemplary embodiment of the System in an independent system eCommerce environment;

FIG. 30 depicts an exemplary alternative embodiment of the Create a Seller's Link screen in an exemplary embodiment of the System in an independent system eCommerce environment;

FIG. 31 depicts the text of an exemplary hypertext link such as is created by an exemplary embodiment of the "Create Link" feature in an exemplary embodiment of the System in an independent system eCommerce environment;

FIG. 32 is a graphic representation depicting an alternative embodiment of a hyperlink generated by the System in an exemplary embodiment of the System in an independent system eCommerce environment;

FIGS. 33a and 33b represent a database schema diagram that depicts an exemplary embodiment of tables in which data is stored by the System regarding a particular Seller Account in an exemplary embodiment of the System in an independent system eCommerce environment;

FIG. 34 is a graphic representation of an exemplary embodiment of a Seller's eCommerce/eAuction web site page in an exemplary embodiment of the System in an independent system eCommerce environment;

FIG. 35 is a graphic representation of an exemplary Buyer shipping rating information collection screen that the Buyer would see upon entry into the System in an exemplary embodiment of the System in an independent system eCommerce environment;

FIG. 36a is a graphic representation depicting an exemplary embodiment of a dynamically dimensioned, multi-carrier, multi-service shipping rates comparison Graphic Array in an exemplary embodiment of the System in an independent system eCommerce environment;

FIGS. 36b through 36e are high level data retrieval logic flow diagrams depicting the data and high level logic that the system uses to calculate a shipping rate;

FIG. 36f is a graphic representation of an alternative exemplary Preview Rates Screen (also referred to in some embodiments as a Rates and Times Screen) in an alternative exemplary embodiment of the invention;

FIGS. 37a and 37b represent a System interactivity data and logic flow diagram depicting an exemplary embodiment of the Create Link and the Buyer's Preview Shipping Rates functionality in an exemplary embodiment of the System in an independent system eCommerce environment;

FIG. 38 is a high level flow diagram depicting an overview of the System logic to



1 generate a dynamically dimensioned, multi-carrier, multi-service shipping rates comparison  
2 Graphic Array in an exemplary embodiment of the System in an Internet environment;

3 FIGS. 39a through 39c are high level flow diagrams depicting the initial timing and  
4 rating logic to develop a dynamically dimensioned, multi-carrier, multi-service shipping rates  
5 comparison Graphic Array in an exemplary embodiment of the System in an Internet  
6 environment;

7 FIG. 40 is a graphic representation depicting an exemplary embodiment of a multi-  
8 carrier, multi-service shipping rates comparison Graphic Array in an exemplary embodiment  
9 of the System in an independent system eCommerce environment;

10 FIG. 41 is a graphic representation of a Seller's Buyer Information Screen in an  
11 exemplary embodiment of the System in an independent system eCommerce environment;

12 FIG. 42 is a graphic representation of an exemplary embodiment of a Subject Parcel  
13 data screen in an exemplary embodiment of the System in an independent system eCommerce  
14 environment;

15 FIG. 43 is a graphic representation of an exemplary embodiment of a System-prepared  
16 e-mail to the Buyer in an exemplary embodiment of the System in an independent system  
17 eCommerce environment;

18 FIG. 44 is a graphic representation of an exemplary embodiment of the Buyer  
19 Response Introduction screen in an exemplary embodiment of the System in an independent  
20 system eCommerce environment;

21 FIG. 45 is a graphic representation of an exemplary embodiment of the Buyer  
22 Shipping Information Collection screen in an exemplary embodiment of the System in an  
23 independent system eCommerce environment;

24 FIG. 46 is a graphic representation depicting an alternative exemplary embodiment of  
25 a dynamically dimensioned, multi-carrier, multi-service shipping rates comparison Graphic  
26 Array in an alternative exemplary embodiment of the System in an independent system  
27 eCommerce environment;

28 FIG. 47 is a graphic representation depicting an exemplary embodiment of a Shipping  
29 Summary Screen in an exemplary embodiment of the System in an independent system  
30 eCommerce environment;

FIG. 48 is a graphic representation depicting an alternative exemplary embodiment of a Shipping Summary Screen in an exemplary embodiment of the System in an Internet environment;

FIG. 49 is a graphic representation depicting an exemplary embodiment of a Cardholder Information collection screen in an exemplary embodiment of the System in an independent system eCommerce environment;

FIG. 50 is a graphic representation depicting an exemplary embodiment of a System's Shipping Log in an exemplary embodiment of the System in an independent system eCommerce environment;

FIG. 51 is a graphic representation depicting an exemplary embodiment of a Seller notification e-mail in an exemplary embodiment of the System in an independent system eCommerce environment;

FIG. 52 is a graphic representation of an exemplary embodiment of a Void Package screen in an exemplary embodiment of the System in an independent system eCommerce environment;

FIG. 53 is a graphic representation of an exemplary embodiment of a Reprint Label screen in an exemplary embodiment of the System in an independent system eCommerce environment;

FIG. 54 is a high level flow diagram depicting an exemplary embodiment of Label Printing in an exemplary embodiment of the System in an Internet environment;

FIG. 55 is a high level flow diagram depicting an exemplary embodiment of Image Printing in an exemplary embodiment of the System in an Internet environment;

FIGS. 56 through 58 are graphic representations of exemplary online screens with which a user controls the final shipping and label printing for a particular package in an alternative exemplary embodiment in an Internet environment;

FIG. 59 is a graphic representation of an exemplary embodiment of a Send Ship Notification screen in an exemplary embodiment of the System in an independent system eCommerce environment;

FIG. 60 is a graphic representation of an alternative exemplary embodiment of a Send Ship Notification screen in an alternative exemplary embodiment of the System in an Internet

1 environment;

2 FIG. 61 is a graphic representation depicting an exemplary embodiment of a Ship a  
3 Package Summary online report in an exemplary embodiment of the System in an  
4 independent system eCommerce environment;

5 FIG. 62 is a graphic representation depicting an exemplary embodiment of a UPS  
6 End-of-Day Screen in an exemplary embodiment of the System in an independent system  
7 eCommerce environment;

8 FIG. 63 is a graphic representation of an exemplary embodiment of a Reprint Driver  
9 Record Screen in an exemplary embodiment of the System in an independent system  
10 eCommerce environment;

11 FIGS. 64a-1, 64a-2, 64b-1 and 64b-2 are System interactivity data and logic flow  
12 diagrams depicting an exemplary embodiment of the process by which the System completes  
13 the information necessary to ship a package in an exemplary embodiment of the System in an  
14 independent system eCommerce environment;

15 FIGS. 65a and 65b represent a database schema diagram that depicts an exemplary  
16 embodiment of tables in which data is stored by the System regarding a particular package  
17 and a particular Seller's Account in an exemplary embodiment of the System in an  
18 independent system eCommerce environment;

19 FIG. 66 depicts an exemplary XML formatted request for submitting a tracking  
20 request to a Carrier in an exemplary embodiment of the System in an Internet environment;

21 FIG. 67 depicts an exemplary successful tracking response, also in XML format,  
22 returned by the Carrier in an exemplary embodiment of the System in an Internet  
23 environment;

24 FIG. 68 is a graphic representation of a Shipper online user input screen that is  
25 displayed on the Shipper's display screen in an exemplary embodiment of the System in an  
26 Internet environment;

27 FIG. 69 is a logic flow diagram that depicts the high level logic for tracking the status  
28 of a particular package in an exemplary embodiment of the System in an Internet  
29 environment;

30 FIG. 70 is a graphic representation of an exemplary embodiment of a Tracking Failure

1 Report Screen in an exemplary embodiment of the System in an Internet environment;

FIG. 71 is a graphic representation of an exemplary embodiment of a Successful Tracking Report Screen for a package with Delivered status in an exemplary embodiment of the System in an Internet environment;

FIG. 72 is a graphic representation of an exemplary embodiment of a Successful Tracking Report Screen for a package with non-final status in an exemplary embodiment of the System in an Internet environment;

8 FIG. 73 is a graphic representation of an exemplary CMS online user input screen in  
9 an exemplary embodiment of the System in an Internet environment;

FIG. 74 is a graphic representation of an exemplary CMS display screen that reports a successful tracking result in an exemplary embodiment of the System in an Internet environment;

FIG. 75 is a graphic representation of an exemplary CMS error tracking report display screen in an exemplary embodiment of the System in an Internet environment;

FIG. 76 is a graphic representation of an exemplary embodiment of a “My Tracking”  
Screen in an exemplary embodiment of the System in an Internet environment;

17 FIG. 77 is a graphic representation of an exemplary embodiment of a Shipping Log  
18 Screen;

FIG. 78 is a graphic representation of an exemplary embodiment of a Detailed Shipping Log Entry Screen in an exemplary embodiment of the System in an Internet environment;

22 FIG. 79 is a graphic representation of an exemplary embodiment of a detailed “Quick  
23 Track” result screen in an exemplary embodiment of the System in an Internet environment;

FIG. 80 is a graphic display of an exemplary embodiment of an “Add Inbound Packages” Screen in an exemplary embodiment of the System in an Internet environment;

FIG. 81 is a graphic representation of an exemplary embodiment of a “View Inbound Packages” Summary Screen in an exemplary embodiment of the System in an Internet environment; and

FIG. 82 is a graphic representation of a View Inbound Packages Detail Screen in an exemplary embodiment of the System in an Internet environment.

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11 “iShip.com”, “iShip”, “The Internet Package Shipper”, “Price It”, “Sell It”, “Track  
12 It”, “Ship It”, “Shipping Tools”, “My iShip” and associated logos are trademarks of  
13 Stamps.com, Inc. The names of actual companies and products mentioned herein may be the  
14 trademarks of their respective owners.

Two types of exemplary Internet-related embodiments of the invention will be described herein: 1.) an exemplary simplified Internet embodiment; and 2.) an exemplary electronic commerce (“eCommerce”) embodiment. Because these two types of embodiments differ somewhat in user interface interaction features and flow, a brief perspective overview of these two exemplary embodiment types is provided below.

24 In the exemplary simplified Internet embodiment of the invention, a system (the  
25 “System”) exemplifying features of the invention provides a single automated computer  
26 interface between users of the system who are shippers of parcels (“Shippers”) and multiple  
27 carriers of parcels (“Carriers”). Each Shipper, using a client computer device, accesses the  
28 System over a global communications network such as the Internet. Each Shipper uses the  
29 System to arrange for, and manage the shipment of, one or more parcels. Each shipment

1 arranged by a Shipper is performed by a particular Carrier, using a particular service offered  
2 by that particular Carrier. References herein to the words “parcel” and “package” include  
3 letters, and larger items (*see, e.g.*, FIG. 15 below and Packaging types 1043 (Carrier Letter),  
4 1044 (Carrier Pak), 1046 (Carrier Box), 1047 (Carrier Tube), and 1045 (Other Packaging)).

5 Each Carrier may provide one or more types of shipment services, such as, for  
6 example, Next Day, Two-Day, etc. Each parcel shipped by the Shipper is shipped to a  
7 particular Recipient. Each supported Carrier has a unique rating schedule, delivery and  
8 pickup rules and schedules, and certification requirements (the “Carrier Rules”).

9 In the exemplary simplified Internet embodiment, the Shipper provides all information  
10 required by the System to facilitate the shipping of each parcel to be shipped by a Carrier  
11 designated by the Shipper; the recipient, once provided with a tracking number can access the  
12 System to track the status of a package but is not called upon to provide any information  
13 necessary to facilitate or manage the shipment. As is further described below, the provision  
14 of information by the Shipper in the exemplary simplified Internet embodiment differs from  
15 the exemplary eCommerce embodiment, in which both the Shipper (also referred to as the  
16 “Seller”) and the Recipient (also referred to as the “Buyer”) provide information to the  
17 System to facilitate and manage a particular shipment.

## 18 19 2. Exemplary eCommerce Embodiment.

20 In an eCommerce embodiment of the invention, the Shipper is a seller (the “Seller”) of  
21 goods through a particular eCommerce or electronic Auction (“eAuction”) provider  
22 (eCommerce or eAuction web site). The Seller/Shipper registers with a particular  
23 eCommerce/eAuction provider (the “Provider”) at the Provider’s Web site to sell, advertise,  
24 or otherwise describe, one or more items that the Seller/Shipper hopes to sell or award to the  
25 highest bidder using an electronic auction facility.

26 As opposed to the exemplary simplified Internet embodiment where all information  
27 necessary for arranging a particular shipment is provided by the Shipper, in the exemplary  
28 eCommerce embodiment of the invention, the System prompts different individuals to provide  
29 information necessary to rate and ship a particular parcel.

1           The Seller/Shipper (sometimes referred to herein simply as the “Seller,” or as the  
2           “Shipper”) provides information to the System concerning the particular parcel that the Seller  
3           will be selling/auctioning and subsequently shipping. The Seller also describes to the System  
4           the Seller’s rules by which potential and actual buyers (sometimes referred to herein as  
5           “Buyers/Recipients”, or simply as “Buyers”, or as “Recipients”) view the shipping, payment  
6           and other options.

7           A potential Buyer of an item to be purchased from a particular Seller is prompted by  
8           the System to initially provide certain limited shipping information (such as a destination zip  
9           code) in order to preview shipping rates for the item that the Buyer is considering purchasing.

10          An actual Buyer is prompted by the System to provide shipping details such as the  
11          Buyer’s destination address. If the Seller has instructed the System to require the Buyer to pay  
12          shipping costs, the System prompts the Buyer to make the final selection of Carrier and  
13          Service.

14          The System in the exemplary eCommerce embodiment provides a communication link  
15          between the Buyer and the Seller, sending certain types of notifications and information  
16          between them.

17          Further differences between the exemplary eCommerce embodiment and the  
18          exemplary simplified Internet embodiment include, among other things, the typical access  
19          entry into the System. In the exemplary simplified Internet embodiment, the Shipper accesses  
20          the Shipping site directly. In the exemplary eCommerce embodiment, the Seller/Shipper can  
21          additionally “link” to the Shipping site from the relevant eCommerce Provider’s Site.

22          The System and screen flows for the exemplary simplified Internet and eCommerce  
23          embodiments differ somewhat. A description of the features that are common between the  
24          two types of embodiments of the present invention is provided below as is a description of the  
25          differences between the two types of exemplary embodiments.

26          In the exemplary eCommerce embodiment described below, the present invention is  
27          provided as a web-based application service from a common provider, sometimes referred to  
28          herein as “iShip.com”. As such, the relevant eCommerce Provider does not have to install or  
29          manage any server software; the Provider only provides a “link” to the System web site.

## B. SYSTEM OVERVIEW

### 1. Entity Interface Relationships

FIG. 1 is a graphic representation depicting the interface relationships provided by an exemplary eCommerce embodiment of the System 1 of the present invention between electronic Commerce providers 2a-2n, Sellers/Shippers 3a-3n, Carriers 4a-4n, and Buyers/Recipients 5a-5n. As conceptually depicted in FIG. 1, each Seller/Shipper 3a-3n views the System 1 as an individualized automated Shipping System.

It should be noted that the use of suffixes such as “a” through “n” in connection with numbered elements of the FIGURES herein are exemplary and are not a limitation of the invention to any particular number. Rather, the suffixes “a” through “n” and “a” through “z”, and similar notations, are used to represent any, but unknown, number of similar elements.

FIG. 2 depicts the interface relationships provided by an exemplary simplified Internet embodiment of the System between the Shippers 3a-3n, Carriers 4a-4n, and Recipients 5a-5n.

As conceptually depicted in FIG. 2, each Shipper 3a-3n views the System 1 as an individualized automated Shipping System.

In both the exemplary eCommerce and simplified Internet embodiments, the System 1 provides Shippers/Users 3a-3n with a computerized shipping and tracking system that allows shipment by the same Shipper/User 3a-3n of different packages using different services provided by different Carriers 4a-4n. Carriers 4a-4n supported by the System include Carriers such as Airborne, FedEx, United Parcel Service, USPS, and Yellow Freight. The System 1 is completely expandable and scalable to include additional Carriers.

### 2. System Configuration and Architecture

In both the exemplary eCommerce and simplified Internet embodiments, as depicted in FIG. 3, each User 7 (Shipper/Seller or Buyer/Bidder) has access to a computer 8, for instance a personal computer (“PC”). The computer 8 is configured with a display device 9 that provides a display screen 10. The computer 8 is further configured with one or more user input devices, such as, for example, a keyboard 11 and a mouse 12. The computer 8 is also



1 configured with a printing device 13, such as a laser printer. The computer 8 may also be  
2 configured with a scale 1024 and a bar code reader 1027.

3 Users access 1003 and browse the Internet 15 using a web browser 14 that generally  
4 resides and is executed on the user's PC 8. The web browser 14 is a computer program or set  
5 of computer instructions that allows the Shipper/User 7 to retrieve and render hyper-media  
6 content from one or more Server computers, e.g., 20a-21z available over the Web. Suitable  
7 commercially available web browsers include, e.g., Netscape's Navigator™ and Microsoft  
8 Internet Explorer™.

9 FIG. 4 is a simplified schematic diagram of a user's computer and the interface  
10 between the user's computer and the System servers, such as 20a-21z in FIG. 3, using the  
11 Internet in an exemplary embodiment of the invention in an Internet environment. PCs 8a-8n  
12 are used by the Shippers and are connected to the Internet 15 through communication links  
13 1003a-1003n respectively. Optionally, a local network 1004 may serve as the connection  
14 between some of the PCs 8a-8n, such as the PC 8a, and the Internet 15. Servers 20a-21z are  
15 also connected to the Internet 15 through respective communication links.

16 Continuing with FIG. 4, each of the PCs 8a-8n includes a central processing unit  
17 ("CPU") 1020a for processing and managing data; user input devices such as a keyboard 11a  
18 and a mouse 12a for inputting data and a main memory 1023a such as a Random Access  
19 Memory ("RAM"). Information in text, graphic and other forms is displayed on the display  
20 monitor ("CRT") 9a under the control of the CPU 1020a. A communication device 1028a,  
21 such as a modem, provides access 1003a to the Internet 15. In some embodiments, one or  
22 more Input/Output ("I/O") devices, such as a printer 13a, scale 1024a, or a bar code reader  
23 1027a are configured with the PC.

24 FIG. 5 is a graphic representation of an exemplary configuration of the System in an  
25 exemplary eCommerce embodiment of the invention depicting interfaces with Carriers  
26 through Carrier Servers, e.g., 23-2 through 27-2, and Shippers/Users through User Input, e.g.,  
27 18. When a Shipper/User ships a package using the System 1, one or more of the System's  
28 Servers, e.g., 21a-21n, create a new System tracking number 19. When a new System  
29 tracking number is created, one of the System's Database Servers, e.g., 20a-20n, adds a new

1 package record with the newly created System tracking number to a Package Table 28. The  
2 Package Table 28 resides in the System database 22 and contains package records for System  
3 processed packages. The System database may be stored on any storage medium, such as but  
4 not limited to, RAM, hard drive, disk drive, tape drive, or other memory device. An  
5 exemplary embodiment of the Package Table contains the following information: 1) Package  
6 Tracking State ID; 2) Package Shipping State ID; 3) Actual Delivery Time; 4) Delivered To  
7 information; 5) Shipping Date; 6) Carrier Tracking Number; 7) System Tracking Number; 8)  
8 Carrier ID; 9) Actual Package Weight; 10) Service Description; and 11) Package OID. The  
9 content of these fields are described further below.

10 As depicted in FIG. 5, using the Carrier's Internet URL, the System 1 (labeled  
11 "iShip.com" in FIG. 5) then makes an HTTP (HyperText Transfer Protocol) connection over  
12 the Internet 15 to the Carrier's web server, e.g., 23-2, 24-2, 25-2, 26-2, or 27-2, using the  
13 URL information for the particular Carrier's web server.

14 The World Wide Web (WWW or Web) is an access protocol for HTTP (HyperText  
15 Transfer Protocol is the communication protocol used by the Internet). The unique  
16 identifier for a Server computer is called the IP (Internet Protocol) address; the unique  
17 identifier for a web site (web page) is called the URL (Uniform Resource Locator). A URL  
18 indicates, among other things, where the Server is located, the location of the web site on the  
19 Server, the name of the web page and the file type of each document.

20 Depending upon the Carrier, the System's 1 request and report interface with the  
21 Carrier's web server is programmed in HyperText Markup Language ("HTML") (e.g., 24-1,  
22 25-1, 27-1), Extensible Markup Language ("XML") (e.g., 26-1), or both HTML and XML  
23 (e.g., 23-1), described by way of example. Examples of XML formatted requests and  
24 responses with respect to Carrier interface communications are described below in connection  
25 with, and depicted in, FIGS. 66 and 67.

26 While the Shipper's/Seller's PC is connected to the Internet 15, a Shipper/Seller may  
27 enter the System's 1 Internet interface in one of several ways. The two principle ways  
28 discussed herein and described below are: 1) by entering an Internet address, e.g., URL, to the  
29 System's home page; or 2) by clicking on an HTML link in an eCommerce/eAuction

1 provider's Web site that contains the URL address to one of the System's Internet pages, for  
2 instance, an initial User registration page. A User may enter the System 1 in other ways,  
3 among which include a direct communication interface between the User's computer system  
4 and the System 1.

5 FIG. 6 is a graphic representation depicting an alternate view of the System  
6 comprising the System Data Center's Server Computers 20a-20n and 21a-21z, the System  
7 Database 22, and the System's interfaces with Seller and Buyer computers 8a-8n, Carrier  
8 Server computers 23-2 through 27-2, and eCommerce/eAuction Providers 28a-28n, via the  
9 Internet 15.

10 FIG. 7 is a simplified graphic representation of an exemplary configuration of the  
11 System, and relationships between the System and Carriers and Shippers/Users, in an  
12 exemplary simplified Internet embodiment of the invention. As depicted in FIG. 7, multiple  
13 servers 20a-21z are provided in a Network Operations Center ("NOC"). At least one of the  
14 Servers 20a-21z can handle multiple telecommunications connections such as over the  
15 Internet 15 at one time. In the embodiment of the NOC depicted in FIG. 7, one Server 20a  
16 provides the computer resources to perform Proxy & Firewall functions between the Internet  
17 15 and the NOC; one Server, e.g., 21n provides the computer resources to act as the NOC  
18 Client Server; one Server, e.g., 21s provides the computer resources to act as the Tracking  
19 Server to obtain Carrier tracking information 1019 from the respective carrier's to provide to  
20 Shippers over the Internet 15; one Server, e.g., 20a provides the computer resources to act as  
21 the Database Server to access data from one or more databases 22 of information; one Server,  
22 e.g., 21t provides the computer resources to act as the Shipping Server; one Server, e.g., 21m  
23 provides the computer resources to act as the Web Server; and one Server, e.g., 21z provides  
24 the resources to provide other services, such as the upload of manifest data 1018 to the Carrier  
25 Host Systems, 23-2 through 23-7.

26 It should be understood that the overview configurations of the System depicted in  
27 FIG. 5, 6 and 7 are exemplary. For example, the depiction of Server 20a in FIG. 7 as having  
28 access to one or more databases 22 is not a limitation of the invention; in alternative  
29 embodiments, such as depicted in FIG. 5, any or all of the Servers, 20a-20n, have access to

1 databases and external storage medium.

2 Continuing with FIG. 7, the Servers 20a-21z are connected to or otherwise capable of  
3 communicating through, a communications network such as a global communications  
4 network such as the Internet 15, which is in turn connected to, or capable of communicating  
5 with one or more Personal Computers ("PC") or other like devices, e.g. 8a, 8b, . . . 8n.

6 Continuing with FIG. 7, Users access and browse the Web using a web browser that  
7 generally resides and is executed on the user's PC, e.g., 8a, 8b, 8c. . . 8n (and as were  
8 depicted in FIG. 4).

9 The Internet works based on a client/server model. The present invention uses the  
10 client/server model to support the communication with and processing for each of multiple  
11 Shippers. For example, as depicted in FIG. 7, the Servers 20a-21z are the server side of the  
12 client/server model; each Shipper's PC 8a, 8b, . . . 8n is a client. The present invention uses  
13 the web browser with which each Shipper's PC accesses the Internet to perform certain  
14 functions as further described herein.

15 Web sites are locations on Servers, such as one or more of the Servers, 20a-21z, that  
16 are accessible through the Internet 15. The Servers 20a-21z host one or more web sites which  
17 are accessible by Shipper users with PCs (e.g., 8a, 8b, . . . 8n) connected with the Internet 15.

18 Carrier Rules, Shipper account information and other content is stored by the Servers,  
19 e.g., 20a in databases e.g. 22. Shippers with PCs (e.g., 8a, 8b, . . . 8n) connected to the  
20 Internet 15 access Carrier Rules, Shipper account information and other content that is stored  
21 by the Servers, e.g., 20a in databases e.g. 22 through a User Interface, which is described in  
22 detail below.

23 An overview of an exemplary System architecture is depicted in FIG. 8. The  
24 overview depicted is exemplary and meant to be illustrative; it is not a limitation of the  
25 invention. As depicted in FIG. 8, one embodiment of the invention uses a three-tiered  
26 architecture.

27 The Data Management Tier 1201 is comprised of a Database Storage component 1202  
28 that in the embodiment depicted uses an SQL Server; a Message Queue Storage component  
29 1203 that in the embodiment depicted uses MS Message Queue; and a File Storage

component 1204 that in the embodiment depicted uses NTFS, and DFS. Each of the Database Storage component 1202, the Message Queue Storage component 1203, and the File Storage component 1204, communicate with the Component Tier 1208 of the System architecture, communications by each component with the Component Tier 1208 represented by elements 1205, 1206 and 1207 respectively. According to the embodiment depicted in FIG. 8, the Server Components of the Component Tier 1208 use C++ programming language and COM Objects.

The Application Tier 1212 of the System Architecture is comprised of a Web Shipper Client component 1213 (which uses HTML, ASP and JavaScript), the NOC Administration component 1214 (which uses HTML, ASP, VB, and C++), and the Web Shipping Station component 1215 (which uses HTML, ASP, JavaScript, C++, and ActiveX Controls). Each of the Web Shipper Client component 1213, the NOC Administration component 1214, and the Web Shipping Station component 1215 communicate with the Server Components of the Component Tier 1208 as represented by the communication elements 1209, 1210 and 1211 respectively.

In one embodiment, the System is implemented in an NT environment. The description of the System as being implemented in an NT environment is exemplary and is not a limitation of the invention.

### 3. Menu Architecture

In both the exemplary eCommerce and simplified Internet embodiments, a User can enter the System by entering an Internet address, e.g., a URL, to the System's home page using the User's client web browser.

FIG. 9 is a graphic representation of an exemplary menu architecture as would be displayed on an exemplary home page in an exemplary eCommerce embodiment of the System 1 as viewed by the User on a display device, e.g., 9 and 10 as depicted in FIG. 3 and 9a as depicted in FIG. 4, connected to the User's Computer, e.g., 8 as depicted in FIG. 3 and 8a as depicted in FIG. 4. The term display as used herein will be understood by those with ordinary skill in the art to include visual display on a display device, e.g., 9 and 10 as depicted

1 in FIG. 3 and 9a as depicted in FIG. 4, connected to the User's Computer, e.g., 8 as depicted  
2 in FIG. 3 and 8a as depicted in FIG. 4.

3 Other menu configurations and descriptions can be implemented without departing  
4 from the spirit of the invention. As depicted in FIG. 9, a main menu bar 34 presents several  
5 selection options, including Home 30a, Sell It 31a, Ship It 32a, and Track It 33a. If a User  
6 selects, such as by using a keyboard device 11 as shown in FIG. 3, 11a as shown in FIG. 4, or  
7 a mouse device 12 as shown in FIG. 3, 12a as shown in FIG. 4, the Home 30a option, the  
8 System 1 will display a Home submenu 30b.

9 References to a User selecting will be understood by those with reasonable skill in the  
10 art to include selection using a user input device, such as a keyboard device 11 as shown in  
11 FIG. 3, 11a as shown in FIG. 4, or a mouse device 12 as shown in FIG. 3, 12a as shown in  
12 FIG. 4, connected to the User's Computer, e.g., 8 as depicted in FIG. 3 and 8a as depicted in  
13 FIG. 4.

14 Using the exemplary menu architecture depicted in FIG. 9, if the User selects the Sell  
15 It 31a option, the System 1 will display a Sell It submenu 31b. If the User selects the Ship It  
16 option, the System 1 will display a Ship It submenu 32b. If the User selects the Track It 33a  
17 option, the System 1 will display a Track It submenu 33b.

18 In an exemplary simplified Internet embodiment of the invention, the Main Menu  
19 would not provide a Sell It 31a application or the submenus and screens associated with the  
20 Sell It 31a application.

## 21 22 C. THE SELLER'S EXPERIENCE

23 In an exemplary eCommerce embodiment of the System, if the User enters the System  
24 through a link from a Provider, the System 1 will ask the User to log in. (A User that is a  
25 Buyer/Bidder that enters the System with a particular Buyer/Bidder URL (Universal Resource  
26 Locator), such as through a hypertext e-mail link as is discussed below, is not required to  
27 follow the log in procedure.) The log in and registration processes described below are also  
28 provided in a similar manner by some simplified Internet embodiments.

29 When a User attempts to log in, the System 1 will attempt to validate the User's log in

1 identification and password. If the User's log in is successful, the System 1 will prompt the  
2 User to select one of the available menu options. Otherwise, the System 1 will prompt the  
3 User to register and will display the first of several information collection screens to prompt  
4 the User through the registration process. Following is a description of the registration User  
5 Interface and the associated System 1 processing in an exemplary eCommerce embodiment of  
6 the invention.

7 FIGS. 10a through 10e are high level logic flow diagrams depicting the logic flow for  
8 processing both Shipper/Seller and Buyer/Bidder information in an exemplary eCommerce  
9 embodiment of the invention. An overview of FIGS. 10a through 10e is provided  
10 immediately below for context. However, the detailed description of FIGS. 10a through 10e is  
11 provided in conjunction with the detailed user interface screens depicted in summary on  
12 FIGS. 10a through 10e. Accordingly, the description of FIGS. 10a through 10e is provided  
13 gradually below with intervening descriptions of the details concerning the user interface  
14 screens described in more detailed FIGURES that are also described below.

15 FIG. 10a depicts general Seller/Shipper/User registration procedures. FIG. 10b depicts  
16 eCommerce/eAuction Seller registration procedures, including the Creation of a Link that the  
17 Seller can copy and paste in the Seller's Web page description of the item to be sold/shipped.  
18 FIG. 10c depicts the actual sales of the item to be shipped and depicts the Buyer experience of  
19 viewing the shipping rates and times comparison provided by the System and purchasing or  
20 bidding on the item as the case may be. FIG. 10d depicts the collection of shipping and  
21 payment information by the Seller and the System 1 from the Buyer. FIG. 10e depicts post  
22 sale shipment and payment processing, tracking and notification. The components of each of  
23 FIGS. 10a through 10e are discussed in detail below.

24 FIG. 10a depicts general User registration procedures. As depicted in FIG. 10a, the  
25 System 1 displays a registration introduction screen 41 to prompt a new eCommerce/eAuction  
26 Seller 40 to register with the System 1.

27 FIG. 11 is a graphic representation depicting an exemplary embodiment of a  
28 registration introduction screen 41 depicted in FIG. 10a. As depicted in FIG. 11, the  
29 registration introduction screen 41 displays introductory text 101 that prompts the User to

1 proceed to the Next screen to provide certain information, such as the User's e-mail and  
2 return address and to identify the Carriers with which the User wishes to ship. The User is  
3 instructed to press the Next button 102 if the User is ready to proceed with registration. It  
4 will be understood by those with ordinary skill in the art that a User "presses" or "clicks" an  
5 onscreen button by using a user input device, such as a keyboard device 11 as shown in FIG.  
6 3, 11a as shown in FIG. 4, or a mouse device 12 as shown in FIG. 3, 12a as shown in FIG. 4,  
7 connected to the User's Computer, e.g., 8 as depicted in FIG. 3 and 8a as depicted in FIG. 4.

8 Alternatively, the User can "press", or "click", on the Reset button 103 which, when  
9 clicked, re-initializes the registration application and returns the User to the Introduction  
10 page; the Cancel button 104, which when clicked returns the User to the Logged Off Home  
11 page; or the Help button 105, which when clicked, displays contextual help text in a pop-up  
12 window.

13 If the User clicks on Next button 102, if the User is using a browser that is not  
14 supported by the System 1, the System 1 prevents the User from continuing and displays a  
15 message to the User that the User's browser is unsupported. Otherwise, if the User clicks the  
16 Next button 102, the System 1 will display the next screen 42 in the registration process as  
17 depicted in FIG. 10a, which is a User address collection screen.

18 FIG. 12 is a graphic representation depicting an exemplary embodiment of a User  
19 address collection screen. As depicted in FIG. 12, the System prompts the User to provide  
20 the User's name 106, e-mail address 107, company name 108, street address 109, floor/room  
21 number 110, department name 111, city 112, state 113a (using a pull down menu button  
22 113b), telephone number 114, zip code 115, and fax number 116. As with the previous  
23 registration introduction screen 41, the Next 102, Reset 103, Cancel 104, and Help 105  
24 buttons are provided with results similar in nature to the operations of these respective buttons  
25 as described above. In addition, a Back button 117 is provided. If the User clicks the Back  
26 button 117, the System returns the User to the screen from which the User entered the present  
27 screen, in this case, the registration information screen 41. If the User clicks the Next button  
28 102, the System performs validation edits on the data entered. If any required fields have not  
29 been completed, or if any fields contain data found to be in error, the System notifies the User



1 and requests that corrected data be entered. Because of the similar nature from screen to  
2 screen in the System with which the Back 117, Next 102, Reset 103, Cancel 104 and Help  
3 105 buttons operate, the operation of these buttons will not be further described.

4 If the data entered is successfully validated, the System displays the next screen,  
5 which in this case is the Shipping Location screen 43 as depicted in FIG. 10a. FIG. 13 is a  
6 graphic representation of an exemplary embodiment of a Shipping Location screen 43. In the  
7 Shipping Location screen 43, the System prompts the User to identify a default location 120a  
8 from which the User will typically ship packages and to provide the city, state, and zip code  
9 of that location 120b. The Shipping Location screen provides a shipping location input field  
10 121a and a shipping location pull down menu button 121b. If the user clicks on the shipping  
11 location pull down menu button 121b, the System will display a selection menu of possible  
12 shipping locations. Example shipping location selection options include: self-service  
13 center/drop box; staffed shipping counter; my location by calling for pickup; my location  
14 through regular pickup; and my local Mail Boxes Etc. center. Exemplary shipping location  
15 options are described further below with regard to FIG. 26.

16 If the User selects the "my local Mail Boxes Etc. center" then a Locations screen is  
17 displayed. FIG. 14 is a graphic representation depicting an exemplary embodiment of a  
18 Locations screen. The Locations screen displays a Locations button 126, that when clicked,  
19 causes the System to display a list 127 of Mail Boxes Etc. centers in the area in and around  
20 the User's zip code. Each entry in the list 127 contains the name and address of the location  
21 128, pickup times 129, and comments 130. The User will be asked to highlight and thereby  
22 select one of the centers. According to the User's selection, the System will display  
23 additional comments if appropriate, e.g., 131. Otherwise, for the other shipping location  
24 selection options, the User is required to enter the city, state, and zip code of the location.

25 FIG. 15 depicts an alternative exemplary embodiment of a Locations screen as a  
26 screen inset. If the Shipper selects a particular "ship center" type from a shipping location pull  
27 down menu (not shown) as the shipping location, the User Interface will display, as shown in  
28 FIG. 15, three elements: 1) a table 1058 with the Location Address, Pickup Times and  
29 Comments Area; 2) a Browse button 1059; and 3) a destination Zip Code field 1042. Clicking

1 the Browse button 1059 will display additional Drop Off Locations in a Pop-up window (not  
2 shown).

3 Returning to FIG. 14, if the User clicks the Next button 102, and if the data entered in  
4 the Shipping Locations screen is successfully validated, the System displays the next screen,  
5 which in this case is the UPS registration screen 44 as depicted in FIG. 10a. FIG. 16 is a  
6 graphic representation of an exemplary embodiment of a UPS registration screen 44. If the  
7 User indicates that the User will ship through the System using UPS and that the User already  
8 has a UPS account 140, the User will be asked to provide the UPS account number 141 and  
9 the scheduled pickup time 142a, a.m. 142b, and p.m. 142c. The System provides the User  
10 with other UPS shipping options, such as dropping the UPS shipments at a shipping center  
11 such as a Mail Boxes Etc 143, or not using the System for shipping UPS 144. Depending on  
12 the User's selection, the System provides appropriate special circumstance notification 145 if  
13 required.

14 If User clicks the Next button 102, and if the data entered in the UPS registration  
15 screen is successfully validated, the System displays the next screen, which in this case is the  
16 eCommerce registration introduction screen 45 as depicted in FIG. 10a. FIG. 17 is a graphic  
17 representation of an exemplary embodiment of an eCommerce registration introduction  
18 screen 45. The eCommerce registration introduction screen 45 provides a textual description  
19 150 of the procedure to setup selling preferences for eCommerce transactions.

20 If the user clicks the Finish button 152 on the eCommerce registration introduction  
21 screen 45, the System finalizes the registration process 46 and sends the User to a registration  
22 complete screen 48a as depicted in FIGS. 10a and 10b. FIG. 10b depicts  
23 eCommerce/eAuction Seller registration procedures, including the Creation of a Link that the  
24 Seller can copy and paste in the Seller's Web page description of the item to be sold/shipped.

25 FIG. 18 is a graphic representation of a registration complete screen 48a. The System  
26 informs the User that the User is registered 153 and that the User's ID and password will be  
27 e-mailed to the User 154. The System summarizes the registration information for the User  
28 155 and instructs the User 156 to click on the Close button 157 to log on to the System for the  
29 first time. If the User clicks on the Close button 157 and logs on to the system, a Welcome

screen, e.g., 48b as depicted in FIG. 10b, is displayed from which the User can request that a Seller's Link be created.

If the user clicks the Continue button 151 on the eCommerce registration introduction screen 45, the System will display 47 the next screen, which is an eCommerce registration screen 49 as depicted in FIGS. 10a and 10b.

FIG. 19 is a graphic representation of an exemplary embodiment of the Seller's Carrier/Service Preferences Screen 49 as depicted in FIG. 10b. With the Seller's Carrier/Service Preferences Screen 49, the System requests 159 the User to identify the Carriers and the Services of each Carrier that the User is willing to allow Buyers/Bidders to choose for shipping the item(s) to be shipped. Each supported Carrier, e.g., Airborne Express 160, FedEx 162, UPS 164, and USPS 166 is available for selection by the User. Further, each service offered by a particular Carrier is also available for User selection. For example, for Airborne Express, Overnight Air Express 161a, Next Afternoon Service 161b, and Second Day Service 161c are available for User selection. The User selects a Carrier or a service by clicking on the selection button, e.g., 160.

FIG. 20 is a graphic representation of an alternative embodiment of the Seller's Carrier/Service Preferences Screen 49. In the example depicted in FIG. 20, the User has selected all Carriers and all services for all Carriers.

If the User clicks the Next button 102 on the Seller's Carrier/Service Preferences Screen 49, the System will display the next screen, which is Seller's Charges and Payment Preferences Screen 50 as depicted in FIG. 10b. FIG. 21 is a graphic representation of an exemplary embodiment of a Seller's Charges and Payment Preferences Screen 50. The System asks the User to select a format for presentation of shipping charges to the Buyer/Bidder 169. The User can select any one of the following choices: 1) the item cost includes shipping charges 170; 2) buyer pays actual shipping charges 171; or 3) buyer pays shipping plus additional charges 172.

If the User chooses the option that the buyer pays shipping charges plus additional charges, then the User must select the types of additional charges that apply, and the value to be added: 1) add percentage of shipping cost 173 and specify percentage 174; 2) add fixed

handling charge 175 and specify the amount of the handling charge 176; and/or 3) add System Service Fee 177.

The System also requires that the User select at least one payment method: Visa 179a, American Express 179b, Personal Check 179c, Cashier's Check 179d, MasterCard 179e, Discover 179f, and/or Money Order 179g. The User is also given the option of requesting that the System collect credit card information and provide the information to the User so that the User can process the information 180.

If the User clicks the Finish button 152 on the Seller's Charges and Payment Preferences Screen 50, then the System will display the Registration Completion Screen 48a previously described above.

FIG. 22 is a graphic representation of an alternative embodiment of the Seller's Charges and Payment Preferences Screen 50 depicting User selections of some of the available options. If the User clicks the Save button 181, the System validates the information, saves the User's choices and specifications, and completes the registration process.

Similarly, with respect to FIG. 21, if the user clicks the Finish button 152 on the Seller's Charges and Payment Preferences Screen 50, the System finalizes the registration process and displays the registration complete screen 48a as depicted in FIG. 10b. As was previously described above, in the registration complete screen 48a, the System summarizes the registration information for the User 155 and instructs the User 156 to click on the Close button 157 to log on to the System for the first time. If the User clicks on the Close button 157 and logs on to the system, a Welcome screen, e.g., 48b as depicted in FIG. 10b, is displayed from which the User can request that a Seller's Link be created.

FIG. 23 is a System interactivity data and logic flow diagram depicting an exemplary embodiment of the Seller's eCommerce Registration process. FIG. 23 depicts the interactivity between the User's client machine (Seller's computer) 8 and the System's server computers 20a-21z. Also depicted are the data accesses to the System database 22. An arrow 230 extending from the top of the diagram and pointing down towards the bottom of the figure graphically represents the passage of time.

As depicted in FIG. 23, the Seller clicks on the Pricing Preferences submenu option 231 (equivalent to 31b-1 as depicted in FIG. 24 under the Sell It option 31a of the main menu 34 as depicted in FIG. 9). The System servers 20a-20n then access the System database 22 to determine whether the Seller's preferences have previously been set 232. In the case that no preferences are found for the specified Seller 233, the System servers 21a-21z generate the signals necessary to display the Carriers and Services Screen 234 to the Seller's computer 8. The Seller selects the Seller's preferred Carriers and Services and clicks the Next button 235 returning control to the System servers 21a-21z. The System servers 21a-21z next generate the signals necessary to display the Charges and Payment screen 236 to the Seller's computer 8. The Seller selects the Charges and Payment options and clicks the Save button 237. The System servers 21a-21z validate the Seller preference information and the System servers 20a-20n store the information on the System database 22. The System servers generate the signals necessary to notify the Seller at the Seller's computer 8 that the Seller's preferences have been saved 239.

There are different ways by which a User can request the System to create a Seller's Link. One way is for the User to enter the System's home page, log in 48b, e.g., as depicted in FIG. 10b, and click on the Sell It 31a, or equivalent, application on the main selection bar 34 as depicted in FIG. 9. Another way is to click on the System logo icon as provided in an eCommerce/eAuction Provider's web site. There are other ways that a User can enter the System. For instance, the eCommerce/eAuction Provider might provide a hyperlink to the System web site.

If the User enters the System Web site, and clicks on the Sell It selection 31a, the System presents either a submenu such as 31b as depicted in FIG. 9, or displays a default first screen in the Sell It application, depending on the embodiment.

If the User has not completely registered for the System and for eCommerce shipping processing, then the System prompts the User to complete the necessary registration process by displaying a Registration Needs Completion screen 51 as depicted in FIG. 10b.

FIG. 24 is a graphic representation of a Registration Needs Completion Screen 51. Similar to the screen depicted in FIG. 17, the System requests the User to provide the

1 necessary information by completing the information requested in subsequent screens 150-1.  
 2 If the User clicks the Next button 102, the System displays the Seller's Carrier/Service  
 3 Preferences Screen 49, and the Seller's Charges and Payment Preferences Screen 50 as  
 4 depicted in FIG. 10b.

5 Once the User has completed registration for the System and for eCommerce shipping  
 6 processing, the System allows the User to select the Create Link submenu option 31b-2 in the  
 7 Sell It Application 31a of the System. If the User selects the Create Link option 31b-2, the  
 8 System displays a Create a Seller's Link Screen 52 as depicted in FIG. 10b. FIG. 25 is a  
 9 graphic representation of an exemplary embodiment of a Create a Seller's Link Screen 52.

10 Before the System can create a Seller's link, the User must tell the System information  
 11 about the particular package that will be shipped. Accordingly, as depicted in FIG. 25, the  
 12 System asks the User to enter the shipping weight and value of the item to be shipped 190.  
 13 The User is asked to enter the Shipping Weight 191a.

14 FIG. 26 depicts an exemplary alternative embodiment of a screen for the input of  
 15 Shipper Parcel Specifications, which in the exemplary alternative embodiment depicted is  
 16 titled the Location and Package Screen. The Location and Package Screen depicted in FIG. 26  
 17 collects Shipper input similar to a portion of the information that which was described in  
 18 connection with FIGS. 13 and 25.

19 As shown in FIG. 26, the Shipper is asked to input the location 1040 from which the  
 20 parcel will be shipped. A pull down menu activation mechanism 1041 is provided to allow  
 21 the user to pull down a menu (not shown) of different shipping locations. It should be noted  
 22 that the exemplary selection mechanisms, e.g., "pull down menu", "drop down selection", and  
 23 others, described herein are used for illustrative purposes and are not a limitation of the  
 24 invention.

25 The Shipper activates the pull down menu by placing the cursor of the Shipper's PC  
 26 over the pull down menu activation mechanism 1041 and leaving the cursor in the same  
 27 position for a certain period of time (this method of activating a selection mechanism will be  
 28 referred to herein as a "Pause Activation"). In alternative embodiments, the Shipper activates  
 29 the pull down menu by placing the cursor of the Shipper's PC over the pull down menu

activation mechanism 1041 and clicking the Shipper's user input device (this method of activating a selection mechanism will be referred to herein as a "Click Activation"). It should be understood that for each activation mechanism depicted in the User Interface of the Present Invention, that the exemplary embodiments of the User Interface depicted herein use the Pause Activation method; alternative embodiments use the Click Activation method.

References herein to "clicking" mean that the Shipper places the cursor of the Shipper's PC on the subject item and clicks the Shipper's user input device.

If the Shipper activates the pull down menu activation mechanism 1041, a menu of different shipping locations (not shown) appears in the Location area 1074 of the screen. The Shipper then selects one of the shipping locations by placing the cursor of the Shipper's PC over a particular shipping location in the shipping location menu and clicking the Shipper's user input device, e.g., mouse.

It should be understood that for each selection mechanism depicted in the exemplary embodiments of the invention, selection of a particular choice from such a selection menu is made by the Shipper clicking the Shipper's user input device.

There are two types of shipping locations, ship centers and customer drop offs. Ship centers are those locations which refer to a database of specific locations, from which a specific location from the available locations must be selected to determine rates, such as an "iShip Center". Customer drop offs are those shipping locations from which a specific location need not be selected to determine rates, such as a "drop box", "carrier counter" or "call for pickup". The shipping location pull down menu displays each shipping location category, e.g., iShip Center, other specific shipping center types, drop box, carrier counter, call for pickup, etc.

As was described with regard to FIG. 15 above, if the Shipper selects a particular "ship center" type from the shipping location pull down menu (not shown) as the shipping location, the User Interface will display, as shown in FIG. 15, three elements: 1) a table 1058 with the Location Address, Pickup Times and Comments Area; 2) a Browse button 1059; and 3) a destination Zip Code field 1042. Clicking the Browse button 1059 will display additional Drop Off Locations in a Pop-up window (not shown).

Returning to FIG. 26, if the Shipper selects a "customer drop off" as the shipping location, the User Interface will display, as shown in FIG. 26, two elements: 1) Origin Zip Code Field 1053; and 2) Destination Zip Code Field 1042.

For either class of shipping location, if an iShip Shipping Station will not be present at the selected shipping location, the System displays a notice (not shown) to the customer telling them that they must have a laser printer to ship using the specified location.

If the Shipper is Logged On to the System and has established an account, the System will default the Shipping Location to the Shipper's specified Preferences which the Shipper inputs (not shown) the first time that the Shipper logs into the System. If the Shipper's specified Preference is a "customer drop off" location, the System populates the Origin Zip Code with the Shipper's default Zip Code which the Shipper inputs (not shown) the first time that the Shipper logs into the System.

If no location is selected by the Shipper, the System displays a message (not shown) asking the Shipper to select a shipping location.

In the Package area 1075 of the screen depicted in FIG. 26 there are the following controls or control groups: 1) "Packaging" which includes various types of parcel packaging , as shown in item numbers 1043-1047 and includes Length 1048, Width 1050 and Height 1049 which are required data fields for parcels designated by the Shipper as the type "Other Packaging"; 2) Weight 1051 (If the Shipper specifies one of the recognized carrier packaging types (Letter, Pak, Box, Tube) the field will be auto filled with "letter", "pak", etc.); and 3) additional handling 1052. If "Letter" is selected the weight will be set by the System to 0.5 lbs. Otherwise, weight may be input by the Shipper (612, FIG. 27a) using a user input device such as a keyboard, with weights ranging from 1 to 150 lbs. If a specific weight is selected or input, the Packaging Type will be set to Carrier Box.

In order to identify the weight of the parcel to the System, in one embodiment of the invention, the Shipper's PC is configured with a scale and the System communicates with the Shipper's scale using the user's client web browser. FIGS. 27a through 27c depict the logic flow for communications between the System and a Shipper's PC and a scale configured with the Shipper's PC. As depicted in FIGS. 27a through 27c , the Shipper establishes in the



1 System certain information about the Shipper's PC configuration at the time the Shipper sets  
2 up an Account 601. If the Shipper's PC is configured with a scale, the Shipper specifies scale  
3 configuration information 602 such as: the make and model of scale, and the type of port  
4 (e.g., serial or parallel) with which the scale is configured with the PC. Further, the System  
5 provides storage and access 603 for the Shipper's scale configuration information in a  
6 database 604.

7 Continuing with FIGS. 27a through 27c, the System supports various makes and  
8 models of scales. Each scale make and model has a set of features and requirements for which  
9 the System must be programmed in order for the System to communicate properly with each  
10 particular scale. The System provides an ActiveX control dedicated to communications with  
11 peripheral devices configured with client PCs ("Shipping Station ActiveX Control") 607.  
12 Contained within the Shipping Station ActiveX Control is a table (the "scale table") 608  
13 containing entries for each supported scale make and model and provides logic to process the  
14 communication information for each scale make and model as appropriate. It should be  
15 understood by someone skilled in the art that the Shipping Station ActiveX Control facilitates  
16 communications with various devices on the client machine. The Shipping Station ActiveX  
17 Control 607 and the scale table 608 are requested 606 by the web page (the "System/scale  
18 interface") containing the Weight field 1051 at the time that the Shipper activates 605 the  
19 Weight field 1051. Once the web page requests the Shipping Station ActiveX Control 607,  
20 the Shipping Station ActiveX Control 607 is automatically installed on the client 609. In the  
21 event that the Shipping Station ActiveX Control is updated to facilitate the support of  
22 additional scale makes and models, the Shipping Station ActiveX Control is automatically  
23 reinstalled on the particular client PC the next time that the Shipper activates the Shipping  
24 Station ActiveX Control.

25 Continuing with FIGS. 27a through 27c, the Shipper places 610 the Subject Parcel on  
26 the scale, such as, e.g., the scale 1024a depicted in FIG. 4, and 1024n depicted in FIG. 7. The  
27 Shipper activates the Shipping Station ActiveX Control by placing the cursor of the Shipper's  
28 PC on the Weight field 1051 (such as the Weight field 1051 depicted in FIGS. 15 and 26).  
29 The System checks the Shipper's scale configuration information to determine 611 whether

1 the Shipper's PC is configured with a scale. If so, the System activates the System/scale  
2 interface 613. Otherwise, the user may input the weight 613 in the Weight field 1051 as  
3 depicted in e.g., FIG. 26.

4 In one embodiment of the System/scale interface aspect of the invention, the System  
5 uses ActiveX control language and the client's web browser, such as Internet Explorer  
6 browser. Continuing with FIGS. 27a through 27c, using the Shipper's scale configuration  
7 information, the System calls Windows libraries 615 to open the serial or parallel port with  
8 which the scale is configured, as the case may be and as is specified in the Shipper's scale  
9 configuration information. Windows is an operating system used with most PCs.

10 Continuing with FIGS. 27a through 27c, the System uses the information for the  
11 particular scale make and model from the scale table 608 of scale makes and models to send a  
12 communication query to the particular scale 616. Typically, the communication query  
13 information required by a particular scale make and model is a particular set of characters.  
14 Each scale make and model recognizes a unique set of characters as a request for a weight.  
15 Accordingly, the appropriate set of characters that means a request for weight to a particular  
16 scale make and model is stored in the scale table for a particular scale make and model.

17 Continuing with FIGS. 27a through 27c, after a proper query, a scale will return a data  
18 stream containing the weight of the parcel 617. Depending on the scale make and model,  
19 other types of information may be contained in the return data stream. The System accesses  
20 the scale table 608 to interpret 618 the return data stream according to the scale make and  
21 model rules as stored in the scale table and as programmed in the Shipping Station ActiveX  
22 Control.

23 Other scale communication information is contained in the scale table for each scale  
24 make and model, including, for example: the character string that communicates a request as  
25 to whether or not the weight is stabilized; the default contents of the return data stream of the  
26 weight from a particular scale make and model; and the character string to request that the  
27 scale send the weight mode with the return data stream. Weight mode is the mode with which  
28 the scale measures weight (e.g., pounds, kilograms, etc.).

29 In one embodiment, as long as the Shipper's cursor remains on the Weight field 1051

1 (such as the Weight field 1051 depicted in FIGS. 15 and 26), the System polls the scale  
2 repeatedly requesting the weight and requesting notification that the weight is stabilized 619.  
3 Each time the System polls the scale, the System tests to determine 620 whether or not there  
4 is a difference in the weight as compared with the last time that the System polled the scale.  
5 If the System determines a difference in weight, then the System uses the Shipping Station  
6 ActiveX Control to fire an event 621 to the client web browser to display on the User  
7 Interface screen that the weight has changed.

8 In one embodiment, once the Shipper removes the cursor from the Weight field 1051,  
9 the System stops polling the scale 622. If prior to the last polling to the scale, the scale  
10 notifies the System that the weight has stabilized 623, the System will proceed with preparing  
11 the Graphic Array if requested to do so by the Shipper 625. Otherwise, if the System  
12 determines a difference in weight, the System notifies the Shipper that the weight is not stable  
13 624.

14 The Shipper can use the Shipper's input device connected to the Shipper's PC, such as  
15 a mouse 12a, as depicted in FIG. 4, to position the cursor on one of the navigational buttons  
16 102-105 shown at the bottom of the screen as depicted in FIG. 26 described above. If the  
17 Shipper clicks the "Next" button 102, the System will display the next Screen, which, in the  
18 embodiment depicted, is the Rates and Times Screen (an exemplary embodiment of which is  
19 depicted in FIG. 36a described below). If the Shipper clicks the "Reset" button 103, the  
20 System will clear the values displayed on the current screen. If the Shipper clicks the  
21 "Cancel" button 104, the System will cancel the Shipper's Parcel Specifications and the  
22 Shipper's service request. If the Shipper clicks the "Help" button 105, the System will  
23 display help text to explain to the Shipper the appropriate possible actions.

24 Returning to FIG. 25, Shipping Weight can be input by clicking the Shipping Weight  
25 pull down menu button 191b which will cause a display of commonly selected weights, such  
26 as "Letter - 0.5 lbs" and weights from 1 to 150 lbs. Alternatively, in one exemplary  
27 embodiment, the User inputs the weight of the package by placing the actual package on a  
28 scale that is configured with the User's computer and with which the System is programmed  
29 to interact as disclosed above

1 The User is also asked to identify whether the item is irregular or requires non-  
2 standard packaging 192. Regarding Loss Protection, the default is Basic Coverage 193. If  
3 the User instead selects Declared Value 194, the User is required to enter a value 195 greater  
4 than \$0.00 and less than or equal to \$50,000.00.

5 Once the User has entered the package specific information 191a-195, as described  
6 above, the User can request the System to preview the shipping charges that will be presented  
7 to a Buyer/Bidder. To do so, the User may either: 1) choose an example destination 196a and  
8 uses the destination pull down menu button 196c to select a sample destination city 196b  
9 from a list of cities; or 2) choose to enter an example zip code 197a by entering a sample zip  
10 code 197b. Then the user clicks the Preview button 198 to display the sample charges. If a  
11 sample destination city was selected from the pull down list of cities, once the User clicks the  
12 Preview button 198, the System identifies the appropriate zip code for the selected city and  
13 moves that zip code into the Destination Zip code field 197b.

14 FIG. 28 depicts an exemplary further supplemental Shipper Parcel Specification  
15 Screen such as in a simplified Internet embodiment of the invention, which in the  
16 embodiment depicted is titled the Service Options Screen. The Service Options Screen  
17 provides for Shipper input of Service Option Selections and displays a Single Day Rate  
18 Graphic Array. The Service Options supported in the depicted embodiment are: 1) Loss  
19 Protection (Declared Value) 1076; 2) E-Mail Delivery Notification 1083; 3) Verbal Delivery  
20 Confirmation 1085; 4) "Service must be guaranteed" 1086; 5) "Destination is a Residence"  
21 1087; and 6) "Signature not Required" 1088. Selection of an option on the screen depicted in  
22 FIG. 28 is accomplished by the Shipper placing the cursor on the option selection mechanism  
23 and clicking the Shipper's user input device.

24 With respect to the Loss Protection (Declared Value) Service Option, if the Shipper  
25 selects the Declared Value Option 1081, the Shipper must enter a value 1082 of greater than  
26 \$100.00, and equal to or less than \$50,000.00. The default for Loss Protection is "Basic  
27 Coverage" 1080 which provides automatic coverage for the first \$100.00 of Declared Value  
28 If the Declared Value option 1081 is selected and a value 1082 entered, the System will  
29 update the Single Day Rate Graphic Array 1096 with changes for each individual Carrier's

1 rates, e.g., 1097.

2 It should be noted that the Carrier Rules described herein, such as in the case of the  
3 defaults, threshold values, and the like concerning Loss Protection, are contained in the  
4 Carrier Rules database (e.g., 1404a through 1404n as depicted in FIG. 38), and for special  
5 cases, are programmed as part of the System. Carrier Rules vary from Carrier to Carrier;  
6 Carrier Rules are subject to change. The Carrier Rules described herein are therefore not a  
7 limitation of the invention.

8 With respect to the E-Mail Delivery Notification Option, two controls are provided - a  
9 checkbox 1083 and an "E-Mail Others" button 1084. If the E-Mail Delivery Notification  
10 Option checkbox 1083 is checked the rates, such as those displayed in the Single Day Rate  
11 Graphic Array 1096, will be updated to reflect each Carrier's charges for the provision of E-  
12 Mail Notification services. If Shipper clicks the "E-Mail Others" button 1084, the following  
13 will occur: 1) If the checkbox 1083 has not already been checked, it will be checked by the  
14 System; and 2) an "E-Mail Others" pop-up window will be displayed by the System as  
15 depicted in FIG. 60 and described below.

16 With respect to the Verbal Delivery Confirmation Option, if the Verbal Delivery  
17 Confirmation Option checkbox 1085 is checked, the rates, such as those displayed in the  
18 Single Day Rate Graphic Array 1096, will be updated to reflect each Carrier's charges for the  
19 provision of Verbal Delivery Confirmation services. If the Verbal Delivery Confirmation  
20 Option checkbox 1085 is checked, the System will use the Shipper's Return Address Phone  
21 and Name as supplied by the Shipper during Account setup (not shown), as the information to  
22 be supplied to UPS.

23 With respect to the "Service must be guaranteed" Option, if the "Service must be  
24 guaranteed" Option checkbox 1086 is checked, the rates and Carrier/Service cells, such as  
25 those displayed in the Single Day Rate Graphic Array 1096, will be updated to remove any  
26 Carrier/Service cell for which service is not guaranteed.

27 With respect to the "Destination is a Residence" Option, if the "Destination is a  
28 Residence" Option checkbox 1087 is checked, the rates and Carrier/Service cells, such as  
29 those displayed in the Single Day Rate Graphic Array 1096, will be updated to remove any

1 Carrier/Service cell which does not provide service to Residence Destinations.

2 With respect to the "Signature not Required" Option, in the embodiment depicted in  
3 FIG. 28, if the "Signature not Required" Option checkbox 1088 is checked, no change will be  
4 applied to the rate graphic. In the embodiment depicted in FIG. 28, the "Signature not  
5 Required" Option is a FedEx only flag and does not effect any other Carrier or any Carrier  
6 rate.

7 The Single Day Rate Graphic Array as displayed in FIG. 28 is similar to the Graphic  
8 Array described below as depicted in FIG. 36a in that the Single Day Rate Graphic Array is  
9 dynamically dimensioned and reflects the Carriers that provide the delivery service requested  
10 by the Shipper for a particular Subject Parcel. As with the Graphic Array, the embodiment of  
11 the Single Day Rate Graphic Array depicted in FIG. 28 uses a color-coded legend 1091 and  
12 color to distinguish the rates for each Carrier from the rates for the other Carriers.

13 The Single Day Rate Graphic Array contains a number of elements. First, the selected  
14 delivery date 1090 is displayed at the top of Single Day Rate Graphic Array. The displayed  
15 date is bordered on the left 1098 and right 1099 with arrow buttons. If the Shipper clicks the  
16 left arrow button 1098, the date will go back one valid delivery date. If the Shipper clicks the  
17 right arrow button 1099, the date will move forward one valid delivery date. The range of  
18 valid delivery dates is determined by the System according to the Expected Ship Date  
19 (element 1060 as depicted in FIG. 36a).

20 Sorted, valid delivery times 1093-1 through 1093-5 for all valid dates are displayed  
21 down the left side of the Single Day Rate Graphic Array. Above the delivery times are up  
22 and down arrow buttons 1100a and 1100b respectively. If an up or down arrow button (1100a  
23 and 1100b respectively) is pressed, the list of available times 1093-1 through 1093-5 will  
24 scroll up or down appropriately, if and only if the list exceeds the Single Day Rate Graphic  
25 Array display area 1096.

26 A Ship Location Type field 1066 and Ship Location drop down menu activator 1067,  
27 are displayed below the Single Day Rate Graphic Array and operate in a manner as described  
28 in FIG. 36a. If the Shipper changes the Ship Location selection, the System will update the  
29 Single Day Rate Graphic Array to reflect any rate changes or surcharges that result from the

1 change.

2 As with the Rates and Times Screen (described below as depicted in FIG. 36a), the  
3 Single Day Rate Graphic Array is color coded by Carrier in a color-coding legend 1091 - that  
4 is, a distinct color is visually depicted in a legend as corresponding to each respective Carrier.  
5 Carrier cell entries, e.g., 1097, for each Carrier are presented in a color-coded display of the  
6 available rate, by date and time.

7 As depicted in FIG. 28, the color for the Carrier identified as "Airborne" 1140b is  
8 depicted in the color coding legend 1091 with a right-diagonal cross-hatch symbol 1140a.  
9 Accordingly, each Carrier cell entry, e.g., 1097, contained within the Single Day Graphic  
10 Array with a particular distinct color, in this case depicted with the right-diagonal cross-hatch  
11 symbol 1140a, corresponds to a delivery of the Subject Parcel supported by the Carrier  
12 "Airborne" 1140b.

13 Each Carrier cell entry, e.g., 1097, contains a graphic element, e.g., 1097a, which  
14 contains what is known as "ALT text". A Shipper viewing the Single Day Rate Graphic  
15 Array online can place the PC's cursor on the graphic element, e.g., 1097a of a particular  
16 Carrier cell entry, e.g., 1097, to display a pop-up screen (not shown) that displays the ALT  
17 text for that particular Carrier cell entry. The ALT text contains information about the  
18 Carrier, as described in FIG. 36a, such as the full Carrier name and the full Carrier service  
19 name. The contents of the ALT text described herein is exemplary and is not a limitation of  
20 the invention.

21 Appearing in each of each of the color-coded Carrier cell entries is a monetary value,  
22 e.g., 1097b, of the price that the corresponding Carrier would charge to deliver the Subject  
23 Parcel according to the time and date specified. For example, as depicted in FIG. 28, the  
24 Carrier cell entry 1097, depicted with the right-diagonal cross-hatch symbol 1140a, contains  
25 the amount \$9.00 (1097b). Accordingly, the amount \$9.00 (1097b) is the price that the  
26 Carrier Airborne would charge to deliver the Subject Parcel at the identified time of 12:00  
27 p.m. 1093-3 on the identified date of Monday, September 28, 1999 1090.

28 Similarly, as depicted in FIG. 28, the color for the Carrier identified as "FedEx" 1141b  
29 is depicted in the color coding legend 1091 with a left-diagonal cross-hatch symbol 1141a.

1 Accordingly, each Carrier cell entry contained within the Graphic Array with the left-diagonal  
2 cross-hatch symbol, e.g., 1107, corresponds to a delivery of the Subject Parcel supported by  
3 the Carrier "FedEx."

4 Further, as depicted in FIG. 28, the color for the Carrier identified as "UPS" 1142b is  
5 depicted in the color coding legend 1091 with a vertical cross-hatch symbol 1142a.

6 Accordingly, each Carrier cell entry contained within the Graphic Array with the vertical  
7 cross-hatch symbol, e.g., 1108, corresponds to a delivery of the Subject Parcel supported by  
8 the Carrier "UPS."

9 In the embodiment of the Service Options Screen depicted in FIG. 28, the navigational  
10 buttons operate much the same as has been previously described except that clicking the  
11 "Back" button 117 will display the previous screen, which in the embodiment depicted is the  
12 Rates and Times Screen (FIG. 36a); clicking the "Next" button 102 will display the next  
13 screen, which in the embodiment depicted is the Summary Screen (FIG. 48). The Shipper  
14 must select a Carrier cell entry before the System will display the Summary Screen. To select  
15 a Carrier cell entry, the Shipper places the cursor over the entry and clicks the user input  
16 device. In an alternative embodiment, the Shipper double clicks a Carrier cell entry to select  
17 the entry. Clicking the Reset button 103 will clear all fields in the Service Option Screen  
18 depicted in FIG. 28 and return the display of the Location and Package Screen (as described  
19 above with regard to FIGS. 15 and 26).

20 Returning to FIG. 25, once the User is satisfied with the previewed charges, the User  
21 can create a Seller's link. To do so, the User must choose the type of Link, HTML 199 or  
22 Web Address only 200, enter the Link Text 201 that will be displayed, and click the Go  
23 button 202.

24 Once the User clicks on the "Go" button 202, the System generates an HTML  
25 hyperlink and moves the HTML hyperlink in the "Link" box 203a. If the HTML hyperlink  
26 text exceeds the space available on the Create a Seller's Link Screen, the User can click on  
27 the up and down scroll buttons, 203b1 and 203b2 respectively.

28 FIG. 30 depicts an exemplary alternative embodiment of the Create a Seller's Link  
29 screen. In this embodiment, the System collects the package specific information when the



1 Seller enters the System and then presents the screen as depicted in FIG. 30 to display the  
2 generated hyperlink.

3 On the Seller's Link Screen depicted in FIG. 30, an Affiliate's Logo 215 is displayed.  
4 The Affiliate's Logo 215 represents the logo of an affiliated eCommerce/eAuction provider.  
5 When Affiliate co-branding is desired, an affiliate identifier is appended to the end of the  
6 URL that refers to the Sell It application as that URL is provided in the affiliate Provider's  
7 Web site. An affiliate identifier is an account number that begins with the prefix "AFF".  
8 When a Seller clicks on a logo or hyperlink for the System that has an affiliate identifier, the  
9 affiliate identifier is sent to the System with the hyperlink. If the System receives an affiliate  
10 identifier in a hyperlink, the System accesses the System database 22 as depicted in FIG. 5,  
11 retrieves the affiliate's logo and color scheme, and uses the affiliate's logo, page element  
12 specifications, and color scheme to alter page elements of the System screens.

13 In one embodiment, the System generates an HTML hyperlink by executing a JAVA  
14 script routine (in alternative embodiments, other scripts are used). The JAVA routine extracts  
15 the Seller's package-specific information from the Create a Seller's Link HTML page (i.e.,  
16 Weight, Irregular or Non-Standard Packaging, Loss Protection, Destination Zip code, Link  
17 Type and Link Text) and integrates the information with a URL (Universal Resource Locator)  
18 that points to the address at which a System web page exists, or a series of System web pages  
19 exist, that will display shipping cost comparisons for a Buyer/Bidder. In one embodiment,  
20 the URL information is hard coded in the web page. The hyperlink built by the System  
21 contains data as well as an address. In an alternative embodiment, the URL is dynamically  
22 generated.

23 In order to create the Link, the System places the appropriate HTML tags and text in a  
24 sequence that can be rendered by a web browser. An example of a hypertext link, like the one  
25 generated in FIGS. 25 and 29, that the "Create Link" application creates is depicted in FIG.  
26 31. Some of the text of the Link (a hyperlink) depicted in FIG. 31 is a template. However,  
27 several components are customized according to the Seller's and the specific item's  
28 information. For instance, the example hyperlink depicted in FIG. 31 contains a variable data  
29 item named "K" 210-1 which is set equal to the account number 210-2 ("A6V1XZ" in this

case) of the Seller's account 210. The example hyperlink depicted in FIG. 31 also contains a variable named "W" which is set equal to the weight in pounds of the package to be shipped (in this case "10") 211; a variable named "V" set equal to the declared value for loss protection of the package (in this case "0") 212; and a variable named "H" which is set equal to an indicator, which if set to "1", the package has irregular or non-standard packaging, if set to "0" (as in this case"), the package is regular with standard packaging 213.

After the System generates the HTML hyperlink, the Seller can copy the HTML hyperlink text 203a as depicted in FIG. 30 using generally available text editing features such as click, drag and copy. The Seller then returns to the Seller's web site or to the eCommerce/eAuction Provider's from which the Seller entered the System and paste the Link text in the Seller's eCommerce/eAuction item description.

The Buyer's/Bidder's experience is described in detail below. However, for purposes of describing the Seller's Link, when the Buyer/Bidder clicks on the Seller's Link in the Seller's web page, the Buyer's/Bidder's Web Browser will use the URL to locate the System Web page that is addressed by the Link. The System will be presented with and receive as input the information in the hypertext link, including the variables and their respective contents as described above 210-213 in connection with FIG. 31.

With the Seller's account number 210, the System accesses the System database 22 as depicted in FIG. 5 and retrieves the following types of information about the Seller: 1) Package origin address; 2) Carriers and services that the Seller has chosen to use; 3) Custom and public carrier rates the Seller can use; 4) Additional handling charges that the Seller wants to impose; and 5) Payment methods the Seller will allow the buyer to use. This type of information was collected by the System during the Seller's Registration process as was described above (e.g., in connection with FIGS. 9-14, 16-25).

With the Seller's information as collected through the Registration process and with the package specific information as provided by the hyperlink Seller's Link, the System, at the address provided by the URL, is programmed to interact with the Buyer, as will be described in detail below, to facilitate shipping of the package, payment information collection, and depending upon the previously provided (during Seller registration)

1 instructions of the Seller, payment processing.

2 FIG. 32 depicts an alternative embodiment of a hyperlink generated by the System.  
3 Instead of the hyperlink explicitly containing the Seller's account number 210 and package  
4 specific information, e.g., 211-213, as depicted in FIG. 31, the hyperlink depicted in FIG. 32  
5 provides a Package Identifier ("PID") 220. A PID hides Seller account information and  
6 package specific information from the Buyer/Bidder by replacing the explicit embedded  
7 information with a single string of facially meaningless characters. In an embodiment of the  
8 System that generates a PID for each package/Seller's Link, every time a Seller creates a  
9 URL with a PID, the System creates a new and unique PID. Without access to the iShip  
10 database, there is no information in a PID from which to determine a Seller's information.

11 The System stores the PID 220 in a PID table in the System database 22 (such as  
12 depicted in FIG. 5) and stores the Seller's account and package specific information, e.g.,  
13 210-213 (such as depicted in FIG. 31) with the PID.

14 In another embodiment, the details associated with the Seller's account, such as the  
15 Seller's various eCommerce and shipping preferences, are stored in detail with the PID 220.  
16 Storing detailed information with a PID 220 provides for additional flexibility in that new  
17 Seller information can be associated with the new PID while not influencing a previously  
18 generated PID and its associated set of information.

19 FIGS. 33a and 33b represent a database schema diagram that depicts an exemplary  
20 embodiment of tables in which data is stored by the System regarding a particular Seller  
21 Account, and from which information is retrieved in order to begin the process of presenting  
22 to the Buyer/Bidder a shipping cost multi-carrier, multi service comparison Graphic Display,  
23 which itself will be discussed in more detail below.

24 As depicted in FIGS. 33a and 33b, the database schema 250 is comprised of an  
25 Account User table 251, a Users table 252, an Account User Configuration table 253, a  
26 Carrier Account table 254, an Account table 255, an Account and Carrier Account table 256,  
27 an Address table 257, a Site Type table 258, an Account and Site Type table 259, an Account  
28 and Site table 260, and a Site table 270.

29 The Account table 255 holds, among other things, information about each Seller's

1 account. In preparing the multi-carrier shipping cost comparison Graphic Display, the System  
2 accesses the Account table in order to determine whether the Account number 210-2  
3 contained in the hyperlink text is a valid Account number 255-1 and in an Active state 255-3.

4 The Account User table 251 is used, among other things, to associate the Seller's  
5 account information with the Seller's security and address information. An address pointer  
6 251-3 into the Address table 257 is used 257-1 to retrieve the Seller's origin address.

7 The Account User Configuration table 253 contains the Seller's preference settings  
8 (not shown) as specified by the Seller. These include Seller's choice of carriers, services,  
9 payment options, type of drop-off / pickup option, and any handling charges the Seller wishes  
10 to impose on the buyer.

11 The Address table 257 holds all the addresses that are used in System applications. In  
12 addition to normal mailing address information, other items stored in this database table  
13 include the Seller's e-mail address and phone numbers.

14 The Carrier Account table 254 holds the carrier account information that the System  
15 uses when a Seller ships a package. As well, this table 254 contains information for  
16 generating each Seller's rates for each carrier.

17 The Account and Carrier Account table 256 ties the carrier accounts 254-1 from the  
18 carrier Account table 254 to the Carrier Accounts 256-2 with which the Seller has specified as  
19 a preferred Carrier to a particular Seller's account 256-1.

20 The Site Table 270 contains information about drop off and pickup site locations. The  
21 Site Type table 258 contains information about each type of site.

22 The Account and Site table 260 relates a particular Seller Account 260-1 to a  
23 particular site pointer 260-2 which in turn points to a particular site record 270-1 in the Site  
24 table 270.

25 The Account and Site Type table 259 relates a particular Account 259-1 to a particular  
26 site type 259-2 which in turn points to a particular site type record 258-1.

27 In one embodiment, once the Seller has decided upon the Seller's preferred options,  
28 the information in the Site Type, Account and Site Type, Account and Site and Site tables  
29 258-270 are stored in the Account User Configuration table 253.

1 Most eCommerce web sites and eAuction sites allow the Seller to generate a custom  
2 Seller's web page for each item being sold. Typically, the Seller's web page utilizes HTML  
3 for the layout, and descriptions and pictures of the item sold or auctioned. During the process  
4 of establishing an eCommerce/eAuction web page, the Seller utilizes the System to register  
5 for the System's shipping management services, to enter the Seller's preferences as described  
6 above, and to enter parameters such as, for example, the weight and packaging, loss  
7 protection and value of the package, as described above that describe the particular item the  
8 Seller is selling/auctioning. The Seller then uses the Create a Seller's Link function of the  
9 System to create a hyperlink. The Seller then uses customary edit controls to copy the  
10 hyperlink and paste the hyperlink into the description of the item to be sold at the Seller's web  
11 site. The result is an HTML hyperlink to view the shipping charges from the auction item  
12 description field, an exemplary embodiment of which is depicted in FIG. 34.

13 As depicted in FIG. 34, the exemplary item bidding requirements and circumstances  
14 301 are described in the Seller's auction web site page. A description of the item available  
15 for bidding is provided 302. The Seller has used the System to copy the hyperlink 203a  
16 created by the system into the description 302 of the item. After returning to the Seller's  
17 auction web site page describing the particular item, the Seller used customary edit controls to  
18 paste the hyperlink into the description 302 of the item 303. The Seller's web site page 53 is  
19 depicted in FIG. 10c.

#### 20 21 D. THE BUYER'S EXPERIENCE IN AN ECOMMERCE EMBODIMENT

22 In an eCommerce embodiment of the present invention, the Buyer/Bidder enters the  
23 Seller's eCommerce/eAuction web site page, such as the one depicted in FIG. 34, and reviews  
24 the Seller's description of the item to be sold/auctioned. If the Buyer/Bidder is interested in  
25 the item, the Buyer/Bidder may click on the System hyperlink 303 for that Seller's item  
26 shipping charges.

27 If the Buyer clicks on the System hyperlink 303, as depicted in FIG. 10c, the  
28 Buyer/Bidder enters the System at the URL address supplied by the hyperlink. FIG. 35 is a  
29 graphic representation of an exemplary Buyer shipping rating information collection screen

that the Buyer would see upon entry into the System. As depicted in FIG. 35, the System displays a Buyer data collection screen 55 (in FIG. 10c) to the Buyer, instructing the Buyer to enter the Buyer's zip code and other options, and to click on the Get Rates button 317 to get a comparison of rates 310. The Buyer enters the deliver-to zip code 311, identifies whether the delivery will be made to a business address 312 or a residence 313, and whether yes 314 or no 315 the Buyer wants the selected Carrier/service to guarantee a delivery time. The System instructs the Buyer to click the "Back" button on the Buyer's web browser to return to the Seller's item web site page 316.

Once the Buyer has supplied the necessary information, if the Buyer clicks the Get Rates button 317, the System validates the information supplied by the Buyer and then combines the information supplied by the Buyer with the information set for the Seller during the Seller's registration/eCommerce registration and calculates and displays a multi-carrier, multi-service rate and time shipping cost comparison Graphic Array 56 (as depicted in FIG. 10c).

An exemplary embodiment of a multi-carrier, multi-service rate and time shipping cost comparison Graphic Array in an exemplary simplified Internet embodiment of the invention is depicted in FIG. 36a.

#### a) THE GRAPHIC ARRAY DISPLAY

FIG. 36a depicts an exemplary Dynamically Dimensioned Multi-Carrier, Multi-Service Graphic Array online display as part of an exemplary supplemental Shipper Parcel Specification Input Screen. FIG. 36a depicts a Graphic Array for an exemplary simplified Internet embodiment. In the embodiment of the Graphic Array depicted in FIG. 36a, the particular screen is titled the Rates and Times Screen.

As depicted in FIG. 36a, the exemplary Graphic Array contains the following information and display elements: 1) valid delivery dates 1063 (1063-1 through 1063-3) across the top of the graphic display for the selected Ship Date; 2) sorted, valid delivery times 1064 (1064-1 through 1064-6) for all valid dates down the left side of the graphic display; and 3) color coded by Carrier, Carrier cell entries, e.g., 1065, for each available rate, by date and

1 time.

2 In the exemplary embodiment depicted in FIG. 36a the Graphic Array comprises an  
3 array of intersecting rows and columns. Each column corresponds to a day and date of parcel  
4 delivery. In FIG. 36a, the days and dates of delivery shown are "TUE 28 SEP 99" (1063-1),  
5 "WED 29 SEP 99" (1063-2) and "THU 30 SEP 99" (1063-3). As depicted in FIG. 36a, space  
6 for other columns (1063-4 through 1063-7) are available for display; in the case of the  
7 example depicted in FIG. 36a however, no dates are displayed in those columns.

8 Each row of the Graphic Array corresponds to a time of delivery. In FIG. 36a, the  
9 times of delivery are shown as "8:00 AM" (1064-1), "10:30 AM" (1064-2), "12:00 PM"  
10 (1064-3), "3:00 PM" (1064-4), "4:30 PM" (1064-5), and "5:00 PM" (1064-6).

11 At the intersection of each row (1064-1 through 1064-6) and column (1063-1 through  
12 1063-7) of the Graphic Array is a "cell." In FIG. 36a, cells will be referred to by the element  
13 1071, and by the intersecting row (1 through 6) and column (1 through 7) the intersection of  
14 which forms the space for each cell (1071-1-1, 1071-1-2, . . . 1071-6-7). Some of the cells  
15 depicted in FIG. 36a are empty, e.g., 1071-5-1, 1071-6-1, 1071-6-3, 1071-6-4. Empty cells  
16 represent the circumstances that none of the Carriers supported by the System (the "supported  
17 Carriers") support delivery of the Subject Parcel for the time and date for which that cell  
18 represents the intersection.

19 Some cells depicted in FIG. 36a have one or more cell entries. In FIG. 36a, each cell  
20 entry represents a particular Carrier. Each Carrier cell entry is color coded with a unique  
21 color, the unique color corresponding to a particular Carrier as is discussed in more detail  
22 below; each Carrier cell entry contains a graphic element, e.g., 1147a, and a monetary  
23 amount, e.g., 1147b, which represents the price for which the corresponding Carrier would  
24 deliver the subject parcel. For instance, cell 1071-1-1 contains a single Carrier cell entry  
25 1148. Cell 1071-3-1 contains two Carrier cell entries 1065 and 1149.

26 A color-coding legend 1062 is displayed on the Screen to identify by a name (1140b,  
27 1141b, 1142b, and 1143b) and a color-coding symbol (1140a, 1141a, 1142a, and 1143a), each  
28 of the supported Carriers that provide the service according to the particular Shipper's Parcel  
29 Specifications for the particular Subject Parcel.

For purposes of this application, unique colors are depicted with graphic symbols. For example, a right-diagonal hash mark symbol 1140a is used herein to represent the color red; a left-diagonal hash mark symbol 1141a is used herein to represent the color purple; a vertical hash mark symbol 1142a is used to represent the color amber; and a horizontal hash mark symbol 1143a is used to represent the color blue. The particular hash mark symbols used herein and the colors mentioned herein are exemplary and are not a limitation of the invention.

Each cell of the Graphic Array that is not empty contains one or more color-coded Carrier cell entries. For example, in FIG. 36a, cell 1071-3-1 contains two Carrier cell entries, 1065 and 1149. Carrier cell entry 1065 is color-coded with the right-diagonal hash mark symbol (representing the color red) which, according to the color-coding legend 1062, corresponds 1140a with the Carrier identified as "Airborne" 1140b. Carrier cell entry 1149 is color coded with the horizontal hash mark symbol (representing the color purple) which, according to the color-coding legend 1062, corresponds 1143a with the Carrier identified as "USPS" 1143b.

Each Carrier cell entry, e.g., 1065, contains a graphic element, e.g., 1065a, which contains what is known as "ALT text". As depicted in FIG. 36a, a Shipper viewing the Graphic Array online can place the PC's cursor on the graphic element, e.g., 1065a of a particular Carrier cell entry, e.g., 1065, to display a pop-up screen 1069 that displays the ALT text for that particular Carrier cell entry. In some embodiments, the ALT text will be displayed by merely placing the cursor over the graphic element for a particular Carrier cell entry and leaving the cursor in that position for a certain time interval. In alternative embodiments, the Shipper must click on the graphic element for a particular Carrier cell entry in order to display the ALT text. In the exemplary embodiment depicted in FIG. 36a, the displayed ALT text, e.g., the text displayed in pop-up screen 1069, contains the full Carrier name (in the depicted case, "Airborne Express") and the full Carrier service name (in the depicted case, "Express Overnight Service") for the Carrier 1140b (in this case, Airborne) to which that Carrier cell entry corresponds.

As depicted in FIG. 36a, the color for the Carrier identified as "Airborne" 1140b is



depicted in the color coding legend 1062 with a right-diagonal cross-hatch symbol 1140a. Accordingly, each Carrier cell entry contained within the Graphic Array with the right-diagonal cross-hatch symbol, e.g., 1065, corresponds to a delivery of the Subject Parcel supported by the Carrier "Airborne." Appearing in each of the color-coded Carrier cell entries, e.g., 1065 is a graphic element, e.g., 1065a, and a monetary value, e.g., 1065b. The monetary value, e.g., 1065b corresponds to the price that the corresponding Carrier would charge to deliver the Subject Parcel according to the time 1064-3 and date 1063-1 specified according to the row and column of which the intersection (which, in the case described is cell 1071-3-1) contains the Carrier cell entry 1065. For example, as depicted in FIG. 36a, the Carrier cell entry 1065, depicted with the right-diagonal cross-hatch symbol, contains the monetary amount "\$9.00." Accordingly, the amount \$9.00 is the price that the Carrier Airborne would charge to deliver the Subject Parcel at the identified time of 12:00 p.m. 1064-3 on the identified date of Tuesday, September 28, 1999 1063-1.

Similarly, as depicted in FIG. 36a, the color for the Carrier identified as "FedEx" 1141b is depicted in the color coding legend 1062 with a left-diagonal cross-hatch symbol 1141a. Accordingly, each Carrier cell entry contained within the Graphic Array with the left-diagonal cross-hatch symbol, e.g., 1147, corresponds to a delivery of the Subject Parcel supported by the Carrier "FedEx."

Further, as depicted in FIG. 36a, the color for the Carrier identified as "UPS" is depicted in the color coding legend 1062 with a vertical cross-hatch symbol 1142. Accordingly, each Carrier cell entry contained within the Graphic Array with the vertical cross-hatch symbol, e.g., 1148, corresponds to a delivery of the Subject Parcel supported by the Carrier "UPS."

Similarly, as depicted in FIG. 36a, the color for the Carrier identified as "USPS" is depicted in the color coding legend 1062 with a horizontal cross-hatch symbol 1143. Accordingly, each Carrier cell entry contained within the Graphic Array with the horizontal cross-hatch symbol, e.g., 1149, corresponds to a delivery of the Subject Parcel supported by the Carrier "UPS."

In the embodiment of the Graphic Array depicted in FIG. 36a, the Graphic Array is

1 dynamically dimensioned. For instance, only the dates and days (1063-1 through 1063-3) for  
2 which delivery that conforms to the particular Shipper's Parcel Specifications for the  
3 particular Subject Parcel are displayed across the top of the graphic. For example, for the  
4 date Tuesday, September 28, 1999 (1063-1), at the time 5:00 p.m. (1064-6), no Carrier  
5 supports delivery of the Subject Parcel.

6 Further, as depicted in FIG. 36a, only the times (1064-1 through 1064-6) during which  
7 at least one of the Carrier/Services identified as supporting the delivery are displayed along  
8 the viewer's left side of the Dynamically Dimensioned Multi-Carrier Graphic Array online  
9 display.

10 Still further, as depicted in FIG. 36a, a Carrier cell entry, e.g., 1065, is displayed for  
11 each of, but only for each of, the Carriers/Services that support delivery for a particular day  
12 and time in the cell of the Graphic Array that represents delivery on a particular day and at a  
13 particular time. When the circumstances require, the System displays one or more Carrier  
14 cell entries in a single cell. For instance, cell 1071-3-1 contains two entries, 1065 and 1149;  
15 whereas cell 1071-1-1 contains only a single cell. Accordingly, as depicted in FIG. 36a, the  
16 cell size expands vertically to accommodate multiple Carrier cell entries.

17 In the exemplary embodiment depicted in FIG. 36a, the color-coding legend 1062 for  
18 each of the Carriers/Services represented in the Graphic Array is displayed with color-coding  
19 graphic elements (1140a through 1143a) and identification labels (1140b through 1143b) for  
20 each relevant Carrier/Service along the viewer's right side of the rating and timing graphic.  
21 Alternatively, instead of the printed name, the logo for the particular Carrier/Service can be  
22 displayed. As another alternative, the Carrier/Service logo can be displayed in color in the  
23 color-coding legend 1062.

24 The particular arrangement of the color legend 1062 depicted in FIG. 36a and the  
25 particular colors used in the color legend depicted therein are exemplary and are not a  
26 limitation of the invention. In an alternative embodiment, instead of using color, other  
27 visually distinctive methods are used to differentiate between different Carriers/Services. For  
28 instance, other visually distinctive methods of Carrier/Service differentiation include but are  
29 not limited to: three-dimensional texture effects, other three-dimensional effects, two-

1 dimensional markings (for instance, dots, cross-hatching, and the like), lighting effects,  
2 graphic symbols (for instance, the logos of the Carriers/Services) and any combination of the  
3 aforementioned features with color.

4 In the embodiment of the Graphic Array depicted in FIG. 36a, the exemplary Graphic  
5 Array is depicted as horizontally wide enough to accommodate seven delivery days (1063-1  
6 through 1063-7) within a particular delivery timespan. The depiction in FIG. 36a of the  
7 Graphic Array as a fixed size accommodating up to seven delivery days is exemplary and is  
8 not a limitation of the invention. In alternative embodiments, the Graphic Array online  
9 display collapses or expands in total size to reflect the actual number of rows and columns  
10 that need to be present in order to display the Carrier cell entries for the Carriers/Services that  
11 support delivery of the Subject Parcel according to the Shipper's Parcel Specifications.

12 The arrangement as depicted in FIG. 36a of the parcel delivery days and dates (1063-1  
13 through 1063-7) across the top and the parcel delivery times (1064-1 through 1064-6) along  
14 the left side of the Graphic Array is exemplary and is not a limitation of the invention. In one  
15 alternative embodiment, the parcel delivery days and dates are displayed across the bottom,  
16 and the parcel delivery times are displayed on the viewer's right side, of the Graphic Array.  
17 In other alternative embodiments, the parcel delivery days are arranged on one of the two  
18 sides of the Graphic Array and the parcel delivery times are arranged along the top or the  
19 bottom of the Graphic Array. In such an alternative embodiment, the cells of the Graphic  
20 Array are expandable horizontally to accommodate the appropriate number of relevant  
21 Carriers/Services.

22 As depicted in FIG. 36a, the Shipper is asked to input the Expected Ship Date 1060.  
23 In the exemplary embodiment depicted, a drop down menu activation mechanism 1061  
24 provides the Shipper the ability to activate a pull down menu (not shown) of seven entries  
25 beginning with the current date and includes the six days immediately following the current  
26 date. The format used is "M/D/YY - Day name". "Today" and "Tomorrow" are displayed  
27 appropriately. The number of entries provided by the selection mechanism, the format of the  
28 Expected Ship Date, and other features described herein are exemplary and are not a  
29 limitation of the invention.

1 In the exemplary embodiment depicted in FIG. 36a, once the Shipper selects the  
2 Expected Ship Date, the System uses the Expected Ship date and the other information  
3 provided by the Shipper, as in the screens depicted in FIGS. 15 and 26 described above, to  
4 access the Carrier Rules, apply the Carrier Rules, and prepare the Graphic Array containing  
5 the delivery prices and delivery times for the Subject Parcel according to the Shipper's Parcel  
6 Specifications. The System will then generate the signals necessary to display the Graphic  
7 Array and cause the Graphic Array to be displayed on the Shipper's PC.

8 Once the Graphic Array is displayed, the Shipper can change previously input  
9 information and the System will automatically regenerate the Graphic Array with the delivery  
10 rates and delivery times that have been updated to reflect the new information. For instance,  
11 if the Shipper selects a new shipping date, the System will regenerate the Graphic Array with  
12 the appropriate new rates and times. The logic for regenerating the Graphic Array is  
13 described in more detail below.

14 In the exemplary embodiment depicted in FIG. 36a, a Ship Location Type drop down  
15 menu activator 1067 is located below the Graphic Array. The particular location of the Ship  
16 Location Type selection mechanism as described herein is exemplary and is not a limitation  
17 of the invention. The list of locations is the same as the Shipping Location Type drop down  
18 menu described above in the description of FIGS. 15 and 26. If the Shipping Location class  
19 is a "ship center", a "Find Location" button 1068 is displayed next to the drop down menu. In  
20 order to open the Drop Off Locator in a pop-up window, the Shipper places the Shipper's PC  
21 cursor on the "Find Location" button 1068 and clicking the Shipper's user input device. The  
22 Origin Zip Code and Ship Location type values supplied by the Shipper are used as  
23 parameters for the Drop Off Locator to locate a list possible Drop Off Location choices. The  
24 Shipper can select a Drop Off Location from the Drop Off Locator menu. The system  
25 dynamically responds to changes by the Shipper to Origin Zip Code and Ship Location type  
26 to present choices of Drop Off Location choices.

27 Navigational buttons appear at the bottom of the Rates and Times Screen depicted in  
28 FIG. 36a. Clicking the "Back" button 117 will return the Shipper to the previously displayed  
29 screen, which in the embodiment depicted is the Location and Package Screen as depicted in

1 FIGS. 15 and 26. Clicking the “Next” button 102 will cause the next screen, which in the  
2 embodiment depicted is the Service Option Screen (FIG. 28), to be displayed but only if the  
3 Shipper has selected a particular Carrier cell entry. For example, if the Shipper click on a  
4 particular Carrier cell entry such as 1065, the System will allow the Shipper to then click on  
5 the “Next” button 102 and proceed to the Service Option Screen as depicted in FIG. 28.

6 If a user returns to the Rates and Times Screen (FIG. 36a) from the Service Option  
7 Screen (FIG. 28), any Service Options selected by the Shipper from the Service Option  
8 Screen (FIG. 28) will effect the displayed rates and will be displayed (not shown) as  
9 abbreviations below the Shipping Location field 1066.

10 The System in an exemplary eCommerce embodiment such as the one described here  
11 creates a multi-carrier, multi-service, shipping cost comparison Graphic Array in much the  
12 same way as is disclosed above with regard to the creation of the Graphic Array in an  
13 exemplary simplified Internet embodiment. The difference is that in an eCommerce  
14 embodiment, instead of collecting only Shipper input, the System collects origination data  
15 including origin zip code, subject parcel data, and Carrier/Service filtering data from the  
16 Seller, and then completes the Parcel Specifications for the subject parcel by collecting input  
17 from the Buyer, including destination zip code.

18 Using the subject parcel’s Parcel Specifications, the System is programmed to access  
19 databases containing information about each supported Carrier. Each supported Carrier has a  
20 unique rating schedule, delivery and pickup rules and schedules, and certification  
21 requirements (the “Carrier Rules”). The System is further programmed to apply each  
22 supported Carrier’s Rules to each Shipper’s Parcel Specifications for the corresponding  
23 Subject Parcel. The System calculates the Shipping Charges based on zip-to-zip pricing  
24 where the Seller has provided the origin zip code and the Buyer has provided the destination  
25 zip code.

26 In an eCommerce embodiment, if the Seller selected as the Seller’s preference, “Item  
27 cost includes shipping charges” (170, FIG. 21), then the rates displayed will be “FREE”. If  
28 the Seller selected as the Seller’s preference, “Buyer pays actual shipping charges” (171, FIG.

21), then the rates displayed will be the total shipping charge as calculated according to each Carrier's rules for each Service available according to the Seller's expressed preferences. If the Seller selected as the Seller's preference, "Buyer pays shipping and additional charges" (172, FIG. 21), then the System will calculate and display rates that are the sum of: 1) the shipping rate for the applicable service according to each Carrier's rules; 2) If the Seller checked "Add Percentage of Shipping Cost" (173, FIG. 21), the product of the percentage entered in the Percentage of Shipping Cost field (174, FIG. 21) and the total shipping rate calculated according to the Carrier's rules; 3) if the Seller checked "Add Fixed Handling Charge" (175, FIG. 21), the dollar value entered in the Fixed Handling Amount field (176, FIG. 21); and 4) if the Seller indicated "Add System Service Fee" (177, FIG. 21), then the System Service Fee amount as indicated in the System database 22.

The Dynamically Dimensioned Multi-Carrier, Multi-Service Graphic Array online display presents only rating and delivery timing information for the Carriers that offer shipping of the particular Subject Parcel according to the particular Shipper's Parcel Specifications and which conform with the Seller's Carrier/Service preferences as selected according to the available options as described above regarding e.g., FIGS. 19 and 20.

FIG. 36f is a graphic representation of an alternative exemplary Dynamically Dimensioned Multi-Carrier, Multi-Service Graphic Array online display as a Preview Rates Screen (also referred to in some embodiments as a Rates and Times Screen) in an alternative exemplary embodiment of the invention. The Graphic Array format of the Preview Rates Screen depicted in FIG. 36f is sortable by price (i.e., cheapest first), by delivery time (i.e., fastest is first), or preferred carrier, as governed by the enterprise and User preferences. The Preview Rates Screen provides the User with the capability to optimize the Rates according to the Best Price 5136, or the Fastest Delivery 5135.

The exemplary Preview Rates Screen depicted in FIG. 36f depicts an array of dates for delivery 5303-5305, multiple Carriers, e.g., 5128 (UPS), 5310 (FedEx), and 5311 (Airborne Express). If the Carriers that provide Services to ship the package according to the User's specifications provide such services on more days than space exists on a single screen display

of the Rate Grid, left and right scroll buttons (not shown) are provided.

The exemplary Preview Rates Screen depicted in FIG. 36f is expandable for each Carrier to display multiple Services for that Carrier, e.g., 5300 for UPS. The Services for a Carrier can be displayed by the User by clicking a scroll down button, e.g., 5129 for UPS. Each listed Service for the Carrier identifies the time for delivery, e.g. 5306. When the Preview Rates Screen is displayed, the Carrier for which the User has specified a preference (if such a preference has been specified) is displayed in the expanded mode, such as is depicted in FIG. 36f for UPS so that all Services supporting shipment of the subject parcel according to the User's specifications are displayed 5300; Carriers for which no preference has been indicated are displayed in contracted mode, such as is the case for Fed Ex 5310, Airborne Express 5311 and UPS 5128.

In the embodiment depicted in FIG. 36f, only the Carriers and Services that support shipment of the subject parcel according to the User's specifications are displayed. In one embodiment of the invention, the User can limit the default display of Carrier and Service comparison to certain Carriers and certain Services. In one such embodiment of the invention, a Show All button (not shown) is provided. Clicking the Show All button causes the System to display all Carriers, Services, and Days of Delivery that support shipment of the subject parcel according to the User's specifications, even if the User has previously limited the available Carriers, Services and Days of Delivery.

A price is displayed in an Array cell, e.g., 5307, 5302, for Carrier/Service that supports delivery of the subject parcel on the specified day of delivery 5303-5305. According to the User's Optimization Selection 5135-5136, an Optimizer icon 5301 is displayed in the particular Graphic Array cell entry that reflects the optimal Carrier/Service.

As was described above, each Carrier is represented in the Graphic Array/Rate Grid by a different color. In the embodiment of the Rate Grid depicted in FIG. 36f, the optimally rated shipping entry for each Carrier is highlighted in the color for that Carrier; all other entries for that Carrier are in grey. The presence or absence of Carriers in the Graphic Array display is driven by User-specified preferences, if any, and by service choices the user has

1 made (for example, by choosing a billing option that only certain Carriers support).

2 The rates calculated and displayed in the Graphic Array are customizable. Some  
 3 Users may wish to see the iShip System transaction charge included in the rate quote. In one  
 4 embodiment of the invention, a Rating button is provided on the same screen on which the  
 5 Graphic Array is displayed, with which the User can toggle the rates displayed in the Graphic  
 6 Array back and forth between the actual shipping rates (including all discounts and fees) and  
 7 the rate that the Carrier charges for shipping.

8

#### 9 b) GENERATION OF THE GRAPHIC ARRAY DISPLAY

10 To develop the rates for display in a Graphic Rates Comparison Array such as the  
 11 ones depicted in FIGS. 36a and 36f, the System rating component is instantiated in the server-  
 12 side script. The rating component's rate information method is invoked with the rate  
 13 parameters embedded in the URL. Based on Carriers' business rules, the rates and their  
 14 service option charges for all Carriers/Services are calculated from each respective Carrier's  
 15 zone data, service/delivery time data and rate data.

16 The System keeps the Carrier data up-to-date in the System database 22. The  
 17 application does not use any carriers' Application Program Interface (API) functions to get the  
 18 rate information. All of carrier rate data is stored in the System database 22 and all business  
 19 rules to calculate the rates are implemented within the System.

20 FIGS. 36b through 36e are high level data retrieval and logic flow diagrams depicting  
 21 the data and high level logic that the system uses to calculate a shipping rate. As depicted in  
 22 FIG. 36b, the following shipping information is used to calculate a shipping rate: Origin  
 23 postal code, Destination postal code, Weight, Packaging, Drop off / Pickup, Country code  
 24 3001. For each Carrier 3002, the rating component of the System uses the origin and  
 25 destination postal codes 3003. The rating component of the System obtains 3003 the zone id  
 26 from the zone table 3008 and gathers 3004 the time for deliveries for all available services  
 27 from the service delivery time table 3009. From the rate table 3010, the rating component  
 28 obtains services charges for the zone id, packaging type and weight 3005. For each service,



the rating component gathers all possible service options charges 3006. After gathering necessary information, the rating component returns an array of rate information 3007. Each element in the array represents a Carrier/Service and consists of service charge, service option charges, and delivery times.

The System calculates the rates according to the following overview logic as depicted in FIGS. 36c-36d. As depicted in FIGS. 36c through 36d, the System retrieves all rate IDs (published, net, and retail) by joining the following database tables on the System's AccountNo: AccountAndCarrierAcnt; CarrierAccount; RateDefinition 3020.

As depicted in FIGS. 36c through 36d, the System then determines the billing rules for all of the Carrier/Service combinations and their service options by joining the following tables on CarrierID, ServiceID, and ServiceOptionID: BillingOption; BillingOptionAndService; BillingOptionAndServiceOption 3021.

As depicted in FIGS. 36c through 36d, for each carrier 3022, the System performs the following procedures: 1) determine if the particular carrier supports the given billing option based on step 2, 3026. If not, continue with the next carrier 3027; 2) Apply carrier business rules, including: a) Calculate dimensional weight 3023; b) Determine billable weight 3024: actual weight, dimensional weight, oversize weight or letter weight; c) Validate package weight and dimensions 3025; (If the rate input violates carrier business rules 3026, continue to next carrier 3027); 3) Determine the zone ID from CarrierZone table for the given origin/destination postal codes 3028; 4) Determine service delivery times 3029 (including Saturday/Sunday delivery times) by joining the following tables on destination postal code: a) CarrierDeliveryArea; b) CarrierServiceDelTime; 5) Determine all service charges from CarrierRate table by RateID, ZoneID, ServiceID and Weight 3030; 6) Determine the service option charges for each Carrier/Service 3031 by joining the following tables on CarrierID and ServiceID: ServiceOption; ServiceOptionAttribute ServiceAndServiceOption; and 7) Apply billing options to service option charges 3032 (different service option charges could be billed to different parties for various billing options).

As depicted in FIG. 36e, the expected delivery times for each Carrier/Service returned

1 in the rate information determine the placement of the rate grid for the particular  
2 Carrier/Service cell: the delivery date determines the columns 3040 while the delivery time  
3 resolves the rows 3041. In the event that multiple rate entries collide 3042, the alphabetical  
4 order of the particular Carrier's name is further used to determine the Graphic Array entry  
5 order within the same date and time bucket 3043. The same Carrier/Service can be placed in a  
6 second time slot in the grid under Saturday or Sunday column 3045 if the Saturday or Sunday  
7 delivery is applicable to the particular Carrier/Service 3044.

8 In an eCommerce embodiment of the invention, a Shipper/Seller can preview a  
9 shipping rate comparison Graphic Array prior to copying the System-created Link, e.g., 203a  
10 as depicted in FIG. 25, for the Seller's eCommerce site. To preview the Graphic Array  
11 comparison of shipping costs, the Seller clicks on the Preview button 198, such as is depicted  
12 in FIG. 25. FIGS. 37a and 37b represent a System interactivity data and logic flow diagram  
13 depicting an exemplary embodiment of the Create Link and the Buyer's Preview Shipping  
14 Rates functionality in an eCommerce embodiment of the present invention. FIGS. 37a and  
15 37b depict the interactivity between the Seller's 8-1 and Buyer's 8-2 client computers and the  
16 System's server computers 20a-21z regarding this functionality. Also depicted are the data  
17 accesses to the System database 22. An arrow 230 extending from the top of the diagram and  
18 pointing down towards the bottom of the figure graphically represents the passage of time.

19 As depicted in FIGS. 37a and 37b, the Seller, using the Seller's computer 8-1, clicks  
20 on the Create a Seller's Link selection option 331 notifying the System servers, e.g., 21a-21z,  
21 to generate a display of the Create a Seller's Link screen 332 for display on the display  
22 monitor of the Seller's computer 8-1. In one embodiment, the Servers 21a-21z send 332 the  
23 necessary information and instructions to build the hyperlink to the Seller's computer 8-1.  
24 The Seller enters the link text and clicks the go button and the Seller's computer 8-1 creates  
25 the Link 333. The Seller then copies the link, returns to the Seller's web page, and pastes the  
26 link 334 in the description of the item to be sold at the eCommerce/eAuction Provider's web  
27 site 345.

28 The Buyer, using the Buyer's computer 8-2, enters the Seller's web page 335 at the

1 eCommerce/eAuction Provider's web site 345. The Seller's web page at the  
2 eCommerce/eAuction Provider's web site 345 displays the item description with the  
3 hyperlink to the System 336 to the Buyer's computer 8-2. The Buyer clicks on the hyperlink  
4 337, causing the System's servers 20a-20z to access 338 the System database 22 to retrieve  
5 339 the Seller's account and eCommerce shipping preference information. The System  
6 servers 21a-21z send a screen to the Buyer's computer 8-2 requesting delivery destination  
7 information 340. The Buyer at the Buyer's computer 8-2 enters the delivery destination  
8 information and clicks on the Get Rates button 341 which signals the System Servers 20a-21z  
9 to prepare the multi-carrier, multi-service Graphic Array. The System Servers 20a-20n access  
10 342 the System data base 22 and retrieve 343 the Seller's preferences and account  
11 information. The System Servers 21a-21z calculate the rates and prepare the Graphic Array  
12 344 for display on the display monitor of the Buyer's computer 8-2.

13 Whether or not the Buyer/Bidder (sometimes simply referred to herein as the Buyer)  
14 uses the hyperlink 303 to preview the shipping charges, if the Buyer buys (or is the high  
15 bidder), the Seller is provided with the Buyer's (or high bidder's) email address and name 54  
16 (as depicted in FIG. 10c) either directly or by the sponsoring Provider. At that point, the  
17 Seller enters the System to supply the System with Buyer information (57 and 58 as depicted  
18 on FIG. 10d) so that the System can contact the Buyer for details and to facilitate the purchase  
19 and shipping of the item.

20 In contrast to the collection of both Seller and Buyer information in an eCommerce  
21 embodiment, the generation of the Graphic Array in the exemplary simplified Internet  
22 embodiment is accomplished using input from the Shipper only. FIG. 38 is a simplified flow  
23 diagram depicting an exemplary high level overview logic flow of the System and the  
24 interaction with the Shipper/User such as in an exemplary simplified Internet embodiment of  
25 the invention. As depicted in FIG. 38, at least one of the Servers 20a-21z are programmed to  
26 provide a User Interface ("UI") that prompts each Shipper user for information about a  
27 particular parcel (the "Subject Parcel") and the Shipper's shipping and delivery requirements  
28 ("Shipper Parcel Specifications") 1401a-1401n. At least one of the Servers 20a-21z is  
29 programmed to receive as a set of input data a particular Shipper's Shipper Parcel

1 Specifications for a particular Subject Parcel 1402. In response to each Shipper's Shipper  
2 Parcel Specifications, at least one of the Servers 20a-21z accesses 1403 one or more databases  
3 of information concerning, among other things, the Carrier Rules for each of the Carriers  
4 supported by the System (the "Supported Carriers") 1404a through 1404n. The Carrier Rules  
5 for each of the Supported Carriers are contained in one or more databases 1404a through  
6 1404n.

7 As further depicted in FIG. 38, the System then applies the Carrier Rules for all  
8 Supported Carriers to each particular set of Shipper Parcel Specifications 1403. From the  
9 result of the application by the System of the Carrier Rules to a particular set of Shipper  
10 Parcel Specifications, the System prepares a Graphic Array that displays a rating and timing  
11 comparison of the delivery services by the supporting Carriers that are available to provide  
12 the delivery of the Subject Parcel according to the Shipper's Parcel Specifications 1405. The  
13 System then formats the Graphic Array for display on the Shipper's PC 1406, and generates  
14 the signals to the Shipper's PC to display the formatted Graphic Array 1407.

15 In one embodiment of the invention, the System provides multiple modes of  
16 operation, among which are the Service Comparison Mode and the Shipping Mode. The  
17 Service Comparison Mode requires origin and destination zip codes but does not require full  
18 address information. The purpose of the Service Comparison Mode is to provide the Shipper  
19 with multi-Carrier comparisons of rates, and shipping and delivery options and requirements  
20 for each of multiple Carriers. In the Shipping Mode, the Shipper must provide the full  
21 address and contact information. The purpose of the Shipping Mode is to print a shipping  
22 label or otherwise provide the information necessary to prepare a shipping manifest  
23 document. Shipper Parcel Specifications are input in both the Service Comparison Mode and  
24 the Shipping Mode.

25 FIGS. 39a through 39c are simplified flow diagrams depicting the initial Timing and  
26 Rating procedure to generate a Graphic Array in an exemplary simplified Internet  
27 embodiment of the invention. In the embodiment of the invention depicted in FIGS. 39a  
28 through 39c, the functions of the Shipper entering shipping information 1150, displaying

errors to the Shipper that insufficient shipping information has been provided and prompting the Shipper for additional information 1153, and displaying the Carrier/Service rate and time graphic 1160, are all processed by the Web Browser at the Client. In the embodiment depicted, all other functions and processes depicted in FIGS. 39a through 39c are performed by one or more of the NOC Servers.

It should be noted that the depicted separation of functions between the Web Browser at the Client on the one hand and the NOC Servers on the other hand represents an initial procedure to construct the Graphic Array in response to initial Shipper input of Shipper Parcel Specifications. As is explained in more detail below, after the initial construction of the Graphic Array, the System can distribute certain of the functions for supplemental regeneration of the Graphic Array to the Web Browser Client.

As depicted in FIGS. 39a through 39c, the Shipper (User) enters shipping information (Shipper Parcel Specifications) 1150. The System validates the shipping information 1151.

In the embodiment depicted, at a minimum, the System requires Source Postal Code, Destination Postal Code, Parcel Weight, Type of Shipment, and the Shipping Location in order to determine a timing schedule and rates for each supported Carrier. If the Shipper has not provided at least these minimum specifications, then the System displays error messages 153 prompting the Shipper to input further Shipper Parcel Specifications 1150.

Continuing with FIGS. 39a through 39c, if the Shipper has supplied the minimum required specifications, then the System accesses the Shipper Database 1195 to identify any user-specified Carrier designations and to determine the Carrier accounts for the appropriate Shipper 1154. Using the Shipper Parcel Specifications, the System then accesses the Carrier Databases (1404a through 1404n) and determines all possible Carrier/Services that support shipping of the subject parcel 1155.

It should be noted that in some embodiments, the Shipper can restrict the identity of Carriers to be used in the construction of the Graphic Array. A Shipper may choose to restrict the System to certain Carriers, for instance, if the Shipper prefers to work only with certain Carriers.

1 Continuing with FIGS. 39a through 39c, the System then examines each  
 2 Carrier/Service in the set of supporting Carrier/Services 1156. The next step 1157 is a  
 3 juncture for return of control from a number of points in the System logic and is performed  
 4 for each Carrier/Service in the set of supporting Carrier/Services.

5 If the System has examined all possible supporting Carrier/Services 1158, the System  
 6 assembles the Graphic Array from the delivery rate set 1159 and displays the Graphic Array  
 7 to the user 1160. As was previously explained, the dimensions of the Graphic Array are  
 8 dynamic.

9 As long as there are further Carrier/Services that remain to be examined in the set of  
 10 supporting Carrier Services, the System continues to perform the process described below.

11 Using the Expected Shipping Date, the System switches the Carrier/Service's shipping  
 12 timespan into possible delivery dates and times 1161. Next 1162, the System determines  
 13 whether the shipping timespan ends on a Saturday 1163. If so, the System accesses the  
 14 Carrier Database (1404a through 1404n) to determine whether the particular Carrier/Service  
 15 supports Saturday Delivery 1164. If the particular Carrier/Service does not support Saturday  
 16 Delivery, then the particular Carrier/Service is eliminated 1177 from the delivery rate set and  
 17 the System proceeds with the next Carrier/Service in the delivery rate set 1157.

18 If the particular Carrier/Service supports Saturday Delivery, the System determines  
 19 the appropriate Saturday delivery rate for the particular Carrier/Service 1165.

20 Continuing with FIGS. 39a through 39c, next, the System determines whether the  
 21 shipping timespan ends on a Sunday 1168. If the shipping timespan ends on a Sunday, the  
 22 System accesses the Carrier Database (1404a through 1404n) to determine whether the  
 23 particular Carrier/Service supports Sunday delivery 1166. If the particular Carrier/Service  
 24 does not support Sunday delivery, then the particular Carrier/Service is eliminated from the  
 25 delivery rate set 1177 and the System proceeds with the next Carrier/Service in the delivery  
 26 rate set 1157.

27 If the particular Carrier/Service supports Sunday Delivery, the System determines the  
 28 appropriate Sunday delivery rate for the particular Carrier/Service 1167.

1           The System then determines whether there is a business day delivery within the  
2 shipping timespan 1169. If so, the System accesses the Carrier Database (1404a through  
3 1404n) to determine whether the particular Carrier/Service supports business day delivery  
4 1170. If the particular Carrier/Service does not support business day delivery, then the  
5 particular Carrier/Service is eliminated from the delivery rate set 1177 and the System  
6 proceeds with the next Carrier/Service in the delivery rate set 1157.

7           If the particular Carrier/Service supports business day delivery, the System determines  
8 the appropriate business day delivery rate for the particular Carrier/Service 1171.

9           Continuing with FIGS. 39a through 39c, the System next determines whether the  
10 Shipper has requested E-Mail delivery notification 1172. If so, the System accesses the  
11 Carrier Database (1404a through 1404n) to determine whether the particular Carrier/Service  
12 supports E-Mail delivery notification 1173. If the particular Carrier/Service does not support  
13 E-Mail delivery notification, then the particular Carrier/Service is eliminated from the  
14 delivery rate set 1177 and the System proceeds with the next Carrier/Service in the delivery  
15 rate set 1157.

16           If the particular Carrier/Service supports E-Mail delivery notification, the System adds  
17 the appropriate charge for the E-Mail delivery notification service to each of the particular  
18 Carrier/Service's delivery rates 1174.

19           Continuing with FIGS. 39a through 39c, the System then determines whether the  
20 Shipper has requested verbal delivery notification 1175. If so, the System accesses the  
21 Carrier Database (1404a through 1404n) to determine whether the particular Carrier/Service  
22 supports verbal delivery notification 1176. If the particular Carrier/Service does not support  
23 verbal delivery notification, then the particular Carrier/Service is eliminated from the delivery  
24 rate set 1177 and the System proceeds with the next Carrier/Service in the delivery rate set  
25 1157.

26           If the particular Carrier/Service supports verbal delivery notification, the System adds  
27 the appropriate charge for the verbal delivery notification service to each of the particular  
28 Carrier/Service's delivery rates 1178.

1           Next 1179, the System determines whether the Shipper has requested that the  
2   Carrier/Service guarantee delivery time 1180. If so, the System accesses the Carrier Database  
3   (1404a through 1404n) to determine whether the particular Carrier/Service supports  
4   guaranteed delivery times 1181. If the particular Carrier/Service does not support guaranteed  
5   delivery times, then the particular Carrier/Service is eliminated from the delivery rate set  
6   1177 and the System proceeds with the next Carrier/Service in the delivery rate set 1157.

7           If the particular Carrier/Service supports guaranteed delivery times, the System adds  
8   the appropriate charge for the guaranteed delivery times service to each of the particular  
9   Carrier/Service's delivery rates 1182.

10          Continuing with FIGS. 39a through 39c, the System then determines whether the  
11   Shipper has requested a "Call for Pickup" shipping location 1184. If so, the System accesses  
12   the Carrier Database (1404a through 1404n) to determine whether the particular  
13   Carrier/Service supports "Call for Pickup" services 1185. If the particular Carrier/Service  
14   does not support "Call for Pickup" services, then the particular Carrier/Service is eliminated  
15   from the delivery rate set 1177 and the System proceeds with the next Carrier/Service in the  
16   delivery rate set 1157.

17          If the particular Carrier/Service supports "Call for Pickup" services, the System adds  
18   the appropriate charge for the "Call for Pickup" service to each of the particular  
19   Carrier/Service's delivery rates 1186.

20          Continuing with FIGS. 39a through 39c, the System next determines whether the  
21   Shipper has requested a "Residential Delivery" 1187. If so, the System accesses the Carrier  
22   Database (1404a through 1404n) to determine whether the particular Carrier/Service supports  
23   "Residential Delivery" services 1188. If the particular Carrier/Service does not support  
24   "Residential Delivery" services, then the particular Carrier/Service is eliminated from the  
25   delivery rate set 1177 and the System proceeds with the next Carrier/Service in the delivery  
26   rate set 1157.

27          If the particular Carrier/Service supports "Residential Delivery" services, the System  
28   adds the appropriate charge for the "Residential Delivery" service to each of the particular



Carrier/Service's delivery rates 1189.

The System then determines whether the Shipper has requested a "Loss Protection" services 1190. If so, the System accesses the Carrier Database (1404a through 1404n) to determine whether the particular Carrier/Service supports "Loss Protection" services 1191. If the particular Carrier/Service does not support "Loss Protection" services, then the particular Carrier/Service is eliminated from the delivery rate set 1177 and the System proceeds with the next Carrier/Service in the delivery rate set 1157.

Continuing with FIGS. 39a through 39c, if the particular Carrier/Service supports "Loss Protection" services, the System calculates the appropriate charge for the "Loss Protection" service and adds the appropriate charge to each of the particular Carrier/Service's delivery rates 1193 before proceeding with the next Carrier/Service in the delivery rate set 1157.

FIG. 40 is a graphic representation depicting an exemplary embodiment of a multi-carrier, multi-service shipping rates comparison Graphic Array 320 in an exemplary eCommerce embodiment of the invention.

c) AUTOMATIC DYNAMIC REGENERATION OF DISPLAY

In the exemplary embodiments of the invention described here, the System automatically and dynamically regenerates the display of the Graphic Array and certain portions of other screens when the Shipper makes online changes to Shipper input. To do this, the System generates executable code which it distributes with certain displayable frames to the Web Browser Client. This distribution of code for purposes of regenerating the Graphic Array differs from the initial generation of the Graphic Array as was described above. For example, in the embodiment of the invention depicted in FIGS. 39a through 39c, in the initial development of the Graphic Array, the System distributes the functions that initially generate the Graphic Array as follows: the Shipper entering shipping information 1150, displaying errors to the Shipper that insufficient shipping information has been provided and prompting the Shipper for additional information 1153, and displaying the Graphic Array 1160, are all

1 processed by the Web Browser at the Client; all other functions and processes depicted in  
2 FIGS. 39a through 39c are performed by one or more of the NOC Servers 20a-21z.

3 Distribution to the Web Browser Client by the System of executable code that  
4 regenerates the Graphic Array provides the capability to dynamically reflect in the Graphic  
5 Array any changes that the Shipper may enter to the various Shipper Parcel Specifications;  
6 the Graphic Array immediately displays the new information without requiring the Shipper to  
7 request a recalculation, such as by clicking on a "Regenerate" button or the like.

8 To facilitate regeneration of the Graphic Array, the System generates executable code  
9 which it distributes with the frame, such as the frame that is displayed to the user for  
10 collecting the Parcel Specifications, to the Web Browser Client. A displayable frame is a set  
11 of information for display on the client display device. For example, in FIG. 36a, in one  
12 embodiment of the invention, a first frame of the screen depicted in FIG. 36a comprises the  
13 Title "Rates & Times" 1109a, the instruction "Click on the price to select a delivery date,  
14 time and carrier." 1109b, the legend "Date you expect to ship your package:" 1109c, the input  
15 field for the Expected Shipping Date 1060, the legend "I'll ship the package from:" 1109d  
16 and the input field for the Shipping Location 1066; a second frame of the screen depicted in  
17 FIG. 36a comprises the Graphic Array.

18 As the System generates the display of each frame, the System generates executable  
19 code which it distributes with, e.g., the Rate & Times frame, to the Web Browser Client.  
20 Thereafter, the Web Browser Client uses the executable code to automatically regenerate the  
21 display of the Graphic Array each time the Shipper makes changes to the Shipper Parcel  
22 Specifications. In one embodiment of the dynamic regeneration aspect of the invention, the  
23 executable code distributed to the Web Browser Client uses JavaScript.

24 In some cases, the executable code sent to the Web Browser Client provides the  
25 information and the capability to regenerate the Graphic Array without any further  
26 communication with the Server. In other cases, the Web Client Browser must return control to  
27 the Server so that the Server can access data maintained by or accessible by the Server; the  
28 Server then regenerates the Graphic Array or otherwise provides the Web Browser Client

1 with the information necessary to regenerate the Graphic Array.

2 In an exemplary embodiment of the automatic dynamic regeneration aspect of the  
 3 invention, the executable code distributed to the Web Browser Client contains the logic to  
 4 apply Carrier Rules to Shipper Parcel Specification changes. For instance, Shipper changes to  
 5 the Service Options screen as depicted in FIG. 28 would be automatically processed by the  
 6 Web Client Browser and the Web Client Browser would regenerate the Single Day Rate  
 7 Graphic Array depicted therein to reflect the Shipper changes. In one such automatic  
 8 dynamic regeneration embodiment, only those functions that do not require further access to  
 9 the relevant Carrier's database are distributed to the Web Browser Client.

10 It should be noted that, according to the automatic dynamic regeneration aspect of the  
 11 invention, if after the Shipper views the Graphic Array the Shipper enters changes to any of  
 12 the factors with which the System calculates the rates and develops the Graphic Array, the  
 13 System uses a similar logic flow to regenerate the Graphic Array as was explained above in  
 14 relation to FIGS. 39a through 39c.

15 The dynamic regeneration capability is used to automatically regenerate response  
 16 screens in many places throughout the System. For instance, as was mentioned above, as in  
 17 the case of FIG. 36a, if the Shipper changes Origin Zip Code and/or Ship Location Type, the  
 18 System will automatically regenerate a list of possible Drop Off Location choices.

19

20 d) COMPLETING PARCEL SPECIFICATIONS AND THE  
 21 BUYER'S INFORMATION

22 In an eCommerce embodiment of the invention, the System collects information from  
 23 both a Seller (the Shipper) and a Buyer (the Recipient). The Seller (Shipper) inputs  
 24 information about the parcel to be shipped and initial information about the Buyer. The  
 25 Buyer then inputs information such as shipping address and payment information. Depending  
 26 upon the Seller's preferences, the Buyer may also be asked to choose one of multiple carriers  
 27 and multiple shipping services.

28 FIG. 41 is a graphic representation of a Seller's Buyer Information Screen (57, FIG.

10d) in an eCommerce embodiment of the invention. The Seller enters the screen in one embodiment by logging in to the System and then selecting the Sell It option 31a and by selecting the Request Buyer Info submenu option 31b-3. The System provides the Seller with instructions to complete the requested data 350. The Seller inputs the Buyer's Name 351, the Buyer's e-mail address 352, an Order/Item number 353, a Description of the Goods to be Shipped 354a (the Seller may scroll through the description using the scroll buttons 354b and 354c if the description exceeds the online screen window for the description text), and a message to the buyer 355a (the Seller may scroll through the message using the scroll buttons 355b and 355c if the message exceeds the online screen window for the message text).

Buyer information and package/item information is mapped by the System into the appropriate shipping data fields (i.e., Buyer name is mapped to Recipient Company/ name; Buyer e-mail is mapped to Recipient e-mail, item/order number is mapped to reference number, etc.).

Clicking on the Next button 102 will cause the System to display the Next screen, which in this case is the package specific information screen (58, FIG. 10d) as depicted in FIG. 42.

FIG. 42 is a graphic representation of an exemplary embodiment of a Subject Parcel data screen. The Seller inputs the weight by clicking on the weight pull down menu button 358-2 and selecting a weight 358-1 from the list. The Seller selects Loss Protection, the default being Basic Coverage 360, or Declared Value 361. If the Seller selects Declared Value 361, the Seller must enter a value 362 greater than \$0.00 and less than or equal to \$50,000.00. The Seller also enters the Item Cost to be displayed to the Buyer 364 and indicates whether or not the System should show the Buyer the total of the Item Cost and Shipping Charges 363. Once the Seller has entered the information, if the Seller clicks on the Send button 365, the System validates the information input and prepares an e-mail to the Buyer (59, FIG. 10d).

At this point, the System generates a System package tracking number. A System tracking number is a unique number generated internally by the System to identify a

1 particular package shipped using the System. One embodiment of the way in which the  
2 System generates a System package tracking number is disclosed below in the Tracking  
3 section of the disclosure of the present invention.

4 FIG. 43 is a graphic representation of an exemplary embodiment of a System-prepared  
5 e-mail to the Buyer. The System builds the e-mail to contain the identification of the System  
6 as the sender 370, the e-mail of the Buyer 352 as supplied by the Seller, a Subject  
7 identification containing the item number 353 as supplied by the Seller, the Buyer name 351  
8 as supplied by the Seller, the Seller name 375 as retrieved from the Seller's account  
9 information retrieved after the Seller logged into the System before entering Request Buyer  
10 Info 31b-3 (e.g., as depicted in FIG. 24), a Reference number as provided by the Seller 353,  
11 instructions to the Buyer 371 to click on the embedded hyperlink 372, and some further  
12 instructions to the Buyer 374. The System builds the hyperlink 372 according to a preset  
13 URL location 372-1 as provided from the System database 22, and specifying the System  
14 package tracking number 372-3 as the value for a variable named "T=" 372-2.

15 If the Buyer's e-mail program is integrated with the Buyer's web browser, then the  
16 Buyer can click on the hyperlink/URL 372 contained in the e-mail. Otherwise, the Buyer  
17 must copy the hyperlink/URL 372 into the Address/Location field of the web browser. When  
18 the Buyer clicks on the hyperlink/URL 372, the System displays the first screen (60, FIG.  
19 10d) in the Buyer Response process.

20 FIG. 44 is a graphic representation of an exemplary embodiment of the Buyer  
21 Response Introduction screen. The System provides the Buyer with instructions 380. The  
22 System instructs the Buyer 382 to indicate 383 the Buyer's choice not to supply the requested  
23 shipping information and an explanation as to why 384-1. The Buyer can scroll through the  
24 explanation using the up and down scroll keys 384-2 and 384-3 if the text of the description  
25 exceeds the online screen window for the text. The Buyer sends the refusal notification and  
26 message by clicking the Send button 385. Otherwise, if the Buyer wishes to proceed, the  
27 Buyer clicks the Next button 381 which will cause the System to display a Buyer Shipping  
28 Information Collection screen (61, FIG. 10d).

FIG. 45 is a graphic representation of an exemplary embodiment of the Buyer Shipping Information Collection screen. The System requests that the Buyer input the Buyer's delivery address information and then click the Next button 389. The Buyer inputs the delivery address information including the Company/Name 390, the Attention to name 391, the street address 392, the floor/room number 393, the department 394, the city 395, the state 396-1 using the pull down menu button 396-2, the zip code 397, the telephone number 398, the fax number 399, and whether the delivery address is a business 400 or a residence 401. If the Buyer then clicks the Next button 102, the System validates the information supplied by the Buyer and displays a screen as depicted in FIG. 46 containing a selection as to whether yes 405 or no 406 the Buyer wants a guaranteed delivery time. Once the Buyer selects the guarantee choice, then the Buyer clicks the Get Rates button 407 to request that the System prepare and display the multi-carrier, multi-service shipping rates comparison Graphic Array 320.

An exemplary embodiment of the Graphic Array 320 in an exemplary eCommerce embodiment of the invention is depicted in FIG. 46. The Graphic Array 320 presents a multi-carrier, multi service rate and time shipping cost comparison as similarly disclosed above and described with respect to FIG. 36a.

The System creates the Graphic Array in much the same way as is disclosed above with respect to FIG. 36a except that, with respect to the eCommerce embodiment, instead of only Shipper input, the System collects origination data including origin zip code, subject parcel data, and Carrier/Service filtering data from the Seller, and then completes the Parcel Specifications for the subject parcel by collecting input from the Buyer, including destination zip code.

Using the subject parcel's Parcel Specifications, the System 1 is programmed to access databases containing information about each supported Carrier. Each supported Carrier has a unique rating schedule, delivery and pickup rules and schedules, and certification requirements (the "Carrier Rules"). The System 1 is further programmed to apply each supported Carrier's Rules to each Shipper's Parcel Specifications for the

1 corresponding Subject Parcel. The System calculates the Shipping Charges based on zip-to-  
 2 zip pricing where the Seller has provided the origin zip code and the Buyer has provided the  
 3 destination zip code.

4 The System provides an online display of a Dynamically Dimensioned Multi-Carrier  
 5 Graphic Array such as is depicted in FIG. 46. If the Seller selected as the Seller's preference,  
 6 "Item cost includes shipping charges" (170, FIG. 21), then the rates displayed will be  
 7 "FREE". If the Seller selected as the Seller's preference, "Buyer pays actual shipping  
 8 charges" (171, FIG. 21), then the rates displayed will be the total shipping charge as  
 9 calculated according to each Carrier's rules for each Service available according to the  
 10 Seller's expressed preferences. If the Seller selected as the Seller's preference, "Buyer pays  
 11 shipping and additional charges" (172, FIG. 21), then the System will calculate and display  
 12 rates that are the sum of: 1) the shipping rate for the applicable service according to each  
 13 Carrier's rules; 2) If the Seller checked "Add Percentage of Shipping Cost" (173, FIG. 21),  
 14 the product of the percentage entered in the Percentage of Shipping Cost field (174, FIG. 21)  
 15 and the total shipping rate calculated according to the Carrier's rules; 2) if the Seller checked  
 16 "Add Fixed Handling Charge" (175, FIG. 21), the dollar value entered in the Fixed Handling  
 17 Amount field (176, FIG. 21); and 4) if the Seller indicated "Add System Service Fee" (177,  
 18 FIG. 21), then the System Service Fee amount as indicated in the System database 22.

19 The Dynamically Dimensioned Multi-Carrier, Multi-Service Graphic Array online  
 20 display presents only rating and delivery timing information for the Carriers that offer  
 21 shipping of the particular Subject Parcel according to the particular Shipper's Parcel  
 22 Specifications and which conform with the Seller's Carrier/Service preferences as selected  
 23 according to the available options as described above regarding FIGS. 19 and 20.

24 The Buyer uses a user input device such as a mouse, track ball, or the like, to pick a  
 25 Carrier and Service. To make the selection, the Buyer, for instance, places the cursor of the  
 26 Buyer's PC on the displayed Carrier cell entry (e.g., 408 as depicted in FIG. 46; e.g., 1065 as  
 27 depicted in FIG. 36a) in the Graphic Array and clicks the Buyer's user input device (the  
 28 "Selected Carrier").

1           Once the Shipper selects a particular Graphic Array Carrier cell element, (e.g., 408 as  
2 depicted in FIG. 46; e.g., 1065 as depicted in FIG. 36a) the System then processes the  
3 shipping transaction. In an exemplary simplified Internet embodiment of the invention, the  
4 System processes the Shipper's shipping transaction using Shipper information from the  
5 Shipper Database 1195 (e.g., as depicted in FIG. 39a) and information for the Selected Carrier  
6 from the Carrier Database 1404a through 1404n (e.g., as depicted in FIG. 39a). In an  
7 exemplary eCommerce embodiment of the invention, the System processes the shipping  
8 transaction using information supplied by both the Seller/Shipper and the Buyer/Recipient  
9 and information for the Selected Carrier.

10           In an eCommerce embodiment of the invention, once the Buyer selects a Carrier and  
11 Service, the System prepares a Shipping Summary Screen (63, FIG. 10d) an exemplary  
12 embodiment of which is depicted in FIG. 47. The System reports a summary of the Shipping  
13 information including the delivery address 410, the Carrier/Service 411 and the itemized and  
14 total charges for the item and shipping 412. In addition, if the Seller requested the System to  
15 collect payment information, the System provides a drop down selection menu button 413-2  
16 which when clicked will display a list of the methods of payment previously selected by the  
17 Seller (e.g., 179a-179g, and 180, as depicted in FIG. 21). If a credit card payment method is  
18 indicated, the Buyer is required to supply a credit card number 414, and the expiration date  
19 month 415-1 (using a drop down menu button 415-2) and year 416-1 (using a drop down  
20 menu button 416-2). The Buyer is instructed to click the Cardholder Information button 417  
21 if the cardholder name and address are different than the shipping name and address 419. If  
22 the Cardholder and shipping information match, the Buyer clicks the Send button 418 to send  
23 the payment information to processing.

24           In an exemplary simplified Internet embodiment of the invention, the System  
25 generates a Shipping Summary Screen once the Shipper has picked a particular  
26 Carrier/Service entry from a Graphic Array comparison. FIG. 48 depicts an alternative  
27 exemplary embodiment of a Shipping Summary Screen such as in an exemplary simplified  
28 Internet embodiment of the invention. In the embodiment depicted in FIG. 48, the Shipper has  
29 picked a particular Carrier/Service entry from a Graphic Array comparison (e.g., 1065 as



1 depicted in FIG. 36a). The Shipping Summary Screen depicted in FIG. 48 displays the  
2 Shipper Parcel Specifications 1110 and provides a detailed list and total, of the selected  
3 Carrier's charges. Clicking on the "Next" button 102 causes the display of the first of a series  
4 of several screens (not shown) requesting the necessary Shipper and Recipient information.  
5 Once the Shipper has input all of the necessary information, the Shipper is presented with a  
6 final Summary and Payment Screen (not shown), which in addition to the fields depicted in  
7 FIG. 48, further requests Payment information, such as Payment Method, Credit Card No.,  
8 Expiration Date, and Credit Card Type.

9 Returning to the eCommerce embodiment depicted in FIG. 47, if the Buyer clicks the  
10 Cardholder Information button 417, the System displays a Cardholder Information collection  
11 screen (64, FIG. 10d), an exemplary embodiment of which is depicted in FIG. 49. The Buyer  
12 is asked to supply the Cardholder name 420, Street address 421, State 422-1 (using a pull  
13 down menu button 422-2), and zip code 423. The Buyer clicks the Save button 424 to save  
14 the cardholder information.

15 As depicted in FIG. 10d, once the Buyer in an eCommerce embodiment has completed  
16 all Buyer Response screens, the System enters the System package tracking number in the  
17 System's Shipping Log for the Seller, an exemplary embodiment of which is depicted in FIG.  
18 50. The System also notifies the Seller via e-mail (66, FIG. 10d) that the Buyer has  
19 completed all of the necessary shipping and payment information.

#### 20 21 E. SHIPPING THE PACKAGE

22 In an exemplary eCommerce embodiment of the invention, the System notifies the  
23 Seller via e-mail (66, FIG. 10d) once the Buyer has completed all of the necessary shipping  
24 and payment information. An exemplary embodiment of a Seller notification e-mail is  
25 depicted in FIG. 51. In the Seller notification e-mail, the System identifies the System as the  
26 sender 370, the Seller's e-mail 107 (e.g., as depicted in FIG. 12) as the recipient 375, and the  
27 item number 353. The e-mail contains a message 425 and instructions 427 to log on to the  
28 System to view a Shipping Log. The Shipping Log provides a platform with which the

1 Shipper/Seller controls the shipping and attendant functions for all packages shipped or to be  
2 shipped by the particular Shipper/Seller.

3 The Seller can view the Shipping Log by selecting the View Shipping Log submenu  
4 option 32b-2 from the Ship It menu option 32b. The Shipper/Seller can control the display  
5 order of the Shipping Log by selecting from a choice of several reporting controls. The  
6 Shipping Log (65, FIG. 10d) as depicted in FIG. 50 provides reporting controls such as  
7 Display selection 430 (with a pull down menu button 431), time period 432 (with a pull down  
8 menu button 433), and sort by 434 (with a pull down menu button 435). The Seller can click  
9 on the Update View button 436 to request an up-to-date report. Each Shipping log line item  
10 contains the System tracking number 438, the addressee name 437, the Carrier 440 and  
11 Service 439, the Ship date 441 and delivery date 442, and control buttons that allow the Seller  
12 to request details 443, instruct the system to ship the item 444, void the shipment 445, or  
13 reprint a label 446.

14 FIG. 52 is a graphic representation of an exemplary embodiment of a Void Package  
15 screen that the System displays if the Seller clicks on the Void button 445 on the Shipping  
16 Log. The Void Package screen provides a summary report of the information about the  
17 particular package 452, provides a View Details button 451 if the Seller wants additional  
18 detailed information about the package, and a Void Package button 453 if the Seller finally  
19 decides to void the identified package.

20 FIG. 53 is a graphic representation of an exemplary embodiment of a Reprint Label  
21 screen which provides a report about the package 454, a View Details button 451, and a  
22 Generate Label button 455. If the User clicks the Generate Label button 455, the System will  
23 generate and print a shipping label (69, FIG. 10e) for according to the appropriate Carrier and  
24 Service, as limited by the Seller and as finally selected by the Buyer.

25 As mentioned above, in some embodiments, the Shipper can use the System to locally  
26 print on the Shipper's printer device a bar-coded shipping label according the Selected  
27 Carrier's certification standards. In some embodiments, the bar-coded shipping label,  
28 including two dimensional bar code labels, and other types of shipping labels, can be printed

1 on either a thermal label printer or on a laser printer. The Shipper specifies the type of printer  
2 to the system during initial setup procedures. Thereafter, the System uses, as appropriate, the  
3 thermal printer or laser printer module to prepare the label image for printing on the Shipper's  
4 printer.

5 FIG. 54 depicts a flow diagram of one embodiment of the aspect of the invention that  
6 provides printing of bar-coded shipping labels on printer devices which are compatible with  
7 the client system on which the web browser is running, such as an HP-compatible laser  
8 printer. As depicted in FIG. 54, one of the NOC Servers, for instance, the Shipping Server,  
9 e.g., 21t as depicted in FIG. 7, gets the Label Size from the Carrier Label Specification 1250,  
10 the Label Layout from the Carrier Label Specification 1251, Label Data from the Shipper  
11 Database 1252, and the Label Quality in Dots Per Inch ("DPI") as set by the Server 1253, and  
12 uses this information to Generate the Label 1254.

13 The Server then creates, and causes the display on the client browser's display device  
14 of, a text string with a specified font face and in a specified font size in an HTML table data  
15 cell with a specified width 1255. If the client browser is using a 096 display device DPI, the  
16 display device will display said text string in the HTML table data cell in a single line. If on  
17 the other hand, the client browser is using a 120 display device DPI, the display device will  
18 display said text string in the HTML table data cell in two lines.

19 In creating the display of the text string, the Server also sends a message to the  
20 Shipper asking the Shipper to answer the following question: do you see the text string  
21 displayed on your screen as a single line or as wrapped text in multiple lines? The Server  
22 receives the Shipper's response and determines from the response whether the Shipper's  
23 display device has displayed the text as a single line or as wrapped text in multiple lines 1256.  
24 If the text is displayed as a single line, then the client browser 1257 display device DPI is  
25 120. Otherwise, the client browser 258 display device DPI is 96.

26 Next, the Server calculates the shipping label HTML image size in pixels 1259 by  
27 multiplying the Carrier-specified label size from the Carrier Label Specification times the  
28 client browser display device DPI as determined by the previous step.

1 Next, the System displays the generated label image in the client browser 1260 with  
2 an HTML image tag and an HTML image size in pixels as calculated in the prior step.

3 The client browser calculates the size of the label to be printed in inches by dividing  
4 the label HTML image size in pixels as calculated in a prior step by the client browser display  
5 device DPI 1261; the client browser then prints out the label with the size calculated 1261.

6 FIG. 55 depicts a flow diagram of an exemplary embodiment of the aspect of the  
7 invention that provides printing of dimensionally accurate images, such as dimensionally  
8 sensitive symbologies including two-dimensional bar codes and other two-dimensional  
9 machine readable symbologies. This aspect of the invention provides the printing of such  
10 dimensionally accurate images on various types of printer devices including among others  
11 HP-compatible laser printers. The printer devices can be configured with remote computers,  
12 such as PC's, that will receive signals to print the dimensionally accurate image over a  
13 communications network such as the Internet. Each PC having a client browser or executing  
14 like software, and each PC being configured with a pre-established Image Resolution that  
15 applies to the display device and the printer device configured with the PC.

16 As depicted in FIG. 55, a computer, such as Server 20t as depicted in FIG. 7,  
17 determines the Image Size 1350, the Image Layout 1351, any relevant Image Data 1352, and  
18 the Image Resolution in Dots Per Inch ("DPI") or in any other measure of Image Resolution  
19 1353. The Server 20t uses this information to Generate the Image.

20 Alternatively, the Image has previously been created; the Server 20t determines from  
21 the Image, the Image Size 1350, the Image Layout 1351, any relevant Image Data 1352, and  
22 the Image Resolution in DPI or in any other measure of Image Resolution 1353 (collectively  
23 referred to hereinafter as the "Image Characteristics").

24 The Server 20t determines the possible Image Resolution Categories and associated  
25 values for client PC's 1354. Image Resolution Categories and associated values include  
26 information such as the number of text strings, and the length of and characteristics (font face,  
27 font size, and HTML table cell width) of each of the identified number of, text strings that  
28 must be used to determine the Image Resolution of client display devices 1355-1356.

1           An HTML table cell width is fixed in that the physical width of the display of the  
2       HTML table cell does not change depending upon the resolution of the client device; a text  
3       string comprised of characters having a particular font and font size has a scalable width,  
4       depending upon the resolution of the client device resolution. Use of an HTML table cell to  
5       measure the resolution of client devices is not a limitation of the invention. In an alternative  
6       embodiment, a graphic element other than an HTML table cell, having a fixed width, is used  
7       to measure the resolution of client devices.

8           The possible Image Resolution Categories and values are stored in the memory of the  
9       Server 20t and updated on some basis. In an alternative embodiment, the possible Image  
10      Resolution Categories and values are input into the Server computer.

11          The Server 20t then analyzes the Image Characteristics, and the possible Image  
12      Resolution categories and/or values 1355, and creates the appropriate number of text strings  
13      and associated HTML table cells 1356. Each text string is created to have a specified font  
14      face, a specified font size, and an associated HTML table cell with a specified width 1356.  
15      The computer then causes the display of the text strings in the associated HTML table cells on  
16      the remote client PC's display device 1358.

17          In creating the display of the text string, the Server also sends a message to the  
18      recipient PC asking the user to answer the following question: is the first text string displayed  
19      on your screen as a single line or as wrapped text in multiple lines? The Server 20t receives  
20      the remote user's response and determines from the response whether the remote user's PC's  
21      display device has displayed each of the text strings as a single line or as wrapped text in  
22      multiple lines 1256. The Server 20t then sets the PC's Remote Image Resolution for printing  
23      the Image 1359 according to the results of the user's PC's display of the text strings.

24          Next, the Server calculates the Remote HTML Image Size in pixels 1360 by  
25      multiplying the Image Size times the PC's Remote Image Resolution as determined by the  
26      previous step.

27          Next, the Server displays the generated image on the display device of the remote PC  
28      1361 with an HTML image tag and the Remote HTML Image Size in pixels as calculated in

1 the prior step.

2 The client browser of the remote PC calculates the size of the Image to be printed  
3 (“Remote Print Image Size”) in inches by dividing the Remote HTML Image Size in pixels  
4 by the Remote Image Resolution 1362; the client browser then prints out the Image with the  
5 Remote Print Image Size 1362.

6 In one embodiment of the invention, instead of printing a shipping label at the  
7 Shipper’s printer, a Package Number 1120 is displayed online on a Package Number Screen  
8 with notification that the label will be printed at a shipping location previously designated by  
9 the Shipper. FIG. 56 depicts an exemplary embodiment of a Package Number Screen. The  
10 Shipper can Void the Package Label at this point by clicking the Void Package button 1121.  
11 The Shipper can request shipping of a new parcel by clicking the “New Package” button 1122  
12 or can indicate completion of shipping instructions by clicking the “Done” button 1123.

13 FIG. 57 depicts an exemplary embodiment of a Generate Shipping Label Screen in an  
14 exemplary simplified Internet embodiment of the invention. The Shipper is given instructions  
15 1125 as to how to print the label. Clicking the “Generate Label” button 1124 causes the bar-  
16 coded label to be generated.

17 FIG. 58 depicts an exemplary embodiment of a Print Label Screen in an exemplary  
18 simplified Internet embodiment of the invention. At the top of the Screen, an instruction  
19 1130 is displayed to scroll to the bottom of the screen for instructions. The generated label  
20 1131 is displayed in the main body of the screen. Instructions for printing the label 1132 are  
21 displayed at the bottom of the screen. Clicking the “Print Label” button 1133 (visible only  
22 for supported web browsers) will cause the label to be printed. Clicking the “Done” button  
23 1134 will close the web browser window.

24 Returning to the exemplary eCommerce embodiment, if the Seller chooses to ship a  
25 specified package, e.g., by clicking on the Ship button 444 as depicted in FIG. 50, the System  
26 requests the Seller to input information to e-mail a notification to the Buyer that the package  
27 is being shipped. FIG. 59 is a graphic representation of an exemplary embodiment of a Send  
28 Ship Notification screen (67, as depicted in FIG. 10e). In one eCommerce embodiment, this

information is automatically prepared by the System and an e-mail (e.g., 70 as depicted in FIG. 10e) is automatically sent to the Buyer when the Seller ships the package. In one embodiment, the Seller completes the information in this screen only if the Seller ships the package with a Carrier or a service that is not supported by the System.

In an exemplary FIG. 60 depicts an exemplary E-Mail Others "Messages" pop-up Window in an exemplary simplified Internet embodiment which allows the Shipper to identify the "To" or "cc" status of the desired notification 1101 using a drop down menu activator 1102 and which allows the user to enter each e-mail recipient's Name 1103 and E-Mail Address 1104. FIG. 60 depicts two Recipients 1107 and 1108; the screen is exemplary and is not a limitation of the invention.

Returning to the exemplary eCommerce embodiment, when the Seller chooses to ship a specified package, the System prepares and displays a Ship a Package Summary report (68, FIG. 10e) an exemplary embodiment of which is depicted in FIG. 61.

If the Seller/Shipper ships packages using UPS, the Seller will need to run UPS End of Day processing (71, FIG. 10e) at least once each day a package is shipped using UPS. FIG. 62 is an exemplary embodiment of the UPS End of Day screen. The System provides instructions 470 and a Perform End-of-Day button 471. The System also provides Reprint instructions to reprint a driver record from a previous End-of-Day process 472 and a Find Driver Record button 473.

FIG. 63 is a graphic representation of an exemplary embodiment of a Reprint Driver Record Screen that lists prior driver records 480, each record provides a Reprint button 481 which when clicked will reprint the driver record (72, FIG. 10e).

After the Seller has completed printing the label, the Seller must give the package to the Carrier (73, FIG. 10e) so that it can be delivered via the Carrier (74, FIG. 10e).

The System provides complete tracking and reporting capabilities for packages shipped through it, and for packages for which a Carrier tracking number is known as described below and as disclosed in U.S. Provisional Patent Application Serial No. 60/170,186 previously attorney docket number 36618/DBP/I249 now attorney docket number

1 36620/DBP/I249, the disclosure of which has previously been incorporated for all purposes  
2 herein by reference.

3 FIGS. 64a-1, 64a-2, 64b-1 and 64b-2 are System interactivity data and logic flow  
4 diagrams depicting an exemplary eCommerce embodiment of the process by which the  
5 System completes the information necessary to ship a package. References in the explanation  
6 and description of FIGS. 64a-1, 64a-2, 64b-1 and 64b-2 to the Buyer mean to the Buyer and  
7 the Buyer's computer 8-2; references to the Seller mean to the Seller and the Seller's  
8 computer 8-1; references to the System mean the System servers, 20a-20n (the database  
9 servers) and 21a-21z (the other System servers); references to the System database mean to  
10 the entire logical System database 22.

11 The Seller eCommerce Preference setup Processes 231 through 239 have been  
12 previously described herein above. After the Seller has completed setting up eCommerce  
13 preferences, and after the Seller is notified of a sale, the Seller enters the System and prepares  
14 to enter Buyer information by clicking on the Buyer information submenu option 501. The  
15 System then displays a Buyer Information screen 502 to the Seller. The Seller then enters  
16 Buyer information and clicks the Next button 503. The System responds by displaying the  
17 Item and Cost screen 504. The Seller enters the item and cost information and sends the  
18 information to the System 505.

19 The System uses the information provided by the Seller to create a new package  
20 record in the System database and sets the status of the package to "waiting for buyer's  
21 response" 506. The System prepares and sends an e-mail to the Buyer requesting information  
22 to complete the shipment and including a URL hyperlink to the System web site page that is  
23 available to intake the Buyer's information, the URL containing a System package tracking  
24 number for the specified package 507. The System also prepares and sends an e-mail to the  
25 Seller informing the Seller that the e-mail has been sent to the Buyer 508.

26 The Buyer upon receipt of the System e-mail, uses a web browser to navigate the URL  
27 in the System e-mail and enter the System 509. The System retrieves the System package  
28 tracking number from the URL provided by the user's browser to access 510 and retrieve 511



1 the package information from the System database. The System provides the Buyer with an  
2 introduction and instructions to complete the process 512. If the Buyer chooses to proceed,  
3 the Buyer clicks the Next button 513. The System then requests Buyer shipping information  
4 514. The Buyer completes the Buyer shipping information and clicks the Next button 515.  
5 The System accesses 516 and retrieves 517 from the System database rating information,  
6 including the Seller's preferences. The System uses the rating information and prepares and  
7 displays for the Buyer a multi-carrier, multi-service shipping cost comparison Graphic Array  
8 518. The Buyer selects a Carrier/Service entry from the Graphic Array to ship the package  
9 519. The System verifies the information and requests payment information from the Buyer  
10 in accordance with the Seller's preferences 520. The Buyer selects a payment method, enters  
11 payment information and Sends the information to the System 521. The System stores all  
12 Buyer information and associates that information with the package, and updates the package  
13 status to "buyer has replied" 522. The System sends an e-mail to the Seller notifying the  
14 Seller that the Buyer has replied 523. The System in some embodiments sends an e-mail to  
15 the Buyer notifying the Buyer that the System has informed the Seller that the Buyer has  
16 replied 524.

17 The Seller requests a Shipping Log of "Today's Packages" 525. The System accesses  
18 the System database 526 to retrieve 527 a Shipping Log of the Seller's packages that need to  
19 be processed. The System displays the Shipping Log to the Seller 528. The Seller locates the  
20 package to which the Buyer responded and clicks the Ship button 529. The System displays  
21 the Shipping screen to the Seller 530.

22 FIGS. 65a and 65b represent a database schema diagram that depicts an exemplary  
23 embodiment of tables in which data is stored by the System regarding a particular package  
24 and a particular Seller's Account, and from which information is retrieved in order to  
25 facilitate the shipment of a package. The database schema depicted in FIGS. 65a and 65b  
26 provides an Account User table 251, a Users table 252, an Account User Configuration table  
27 253, a Carrier Account table 254, an Account table 255, an Account and Carrier Account  
28 table 256, an Address table 257, a Site Type table 258, an Account and Site Type table 259,  
29 an Account and Site table 260, and a Site table 270, all of which were previously described

herein above with respect to FIGS. 33a and 33b. The database schema with respect to package information further provides the Package Table 261. The Package Table 261 contains for each package, among other things, a Package OID (a pointer) 261-1, the actual weight 261-2, length 261-3, width 261-4, height 261-5, System package tracking number 261-6, site type ID 261-7, Site OID (a pointer) 261-8, Account number 261-9, User ID 261-10, From contact name 261-11, From address 1 261-12, To contact name 261-13, To address 1 261-14, Bill contact name 261-15, and the Bill address 1 261-16.

F. TRACKING

The tracking features described below apply similarly to both an exemplary simplified Internet embodiment and to an exemplary eCommerce embodiment of the invention.

1) USER REQUESTED TRACKING

In order to track a particular package using the System, a Shipper identifies a tracking number for that package to the System and requests that the System report the status of the package. Two types of tracking numbers are used to track packages: 1) Carrier tracking numbers and 2) System tracking number.

Each Carrier assigns each package a tracking number that uniquely identifies each package and which is used to trace packages as the package moves through the particular Carrier's system to the package's destination. The Shipper or the package recipient uses the tracking number for a particular package to track, locate, and verify delivery of the particular package.

A System tracking number is a unique number generated internally by the System to identify a particular package shipped using the System. The Shipper inputs the Shipper's Parcel Specifications for the Subject Parcel. Using each Shipper's Parcel Specifications, the System is programmed to access databases containing information about each supported Carrier. Each supported Carrier has a unique rating schedule, delivery and pickup rules and

schedules, and certification requirements (the "Carrier Rules"). The System is further programmed to apply each supported Carrier's Rules to each Shipper's Parcel Specifications for the corresponding Subject Parcel. The System provides an online display of a Dynamically Dimensioned Multi-Carrier, Multi-Service Graphic Array as depicted, e.g., in FIGS. 36a and 46 described above.

The Shipper in this case uses a user input device to pick the preferred Carrier, by for instance placing the cursor of the Shipper's PC on the displayed Carrier cell entry, e.g. 1065a, in the Graphic Display as depicted in FIG. 36a and clicking the Shipper's user input device (the "Selected Carrier").

As a result of the Shipper selecting a Carrier cell entry in the Graphic Display to ship a package, the System assigns the package a System package tracking number and adds a record containing all of the pertinent information about the package to the System database 22. Following are exemplary Shipping tracking numbers: MAGGY841VRY50; MAGGY84B496RF; MAGGY84X0FJ45. In one embodiment, the System Tracking Number is based on a Base-33 number system. The characters available are: Zero (0) through nine (9) and A through Z excluding "I" (i), "L" (l), and "O" (o). Each letter represents a value, as depicted in the table below:

A = 10 F = 15 M = 20 S = 25 X = 30

B = 11 G = 16 N = 21 T = 26 Y = 31

C = 12 H = 17 P = 22 U = 27 Z = 32

D = 13 J = 18 Q = 23 V = 28

E = 14 K = 19 R = 24 W = 29

Each System Tracking Number is 13 alphanumeric characters. Position 1 is the letter 'M'. Positions 2 - 7 are a System Account number. Positions 8 - 12 are a five-digit ID. Position 13 is a Check Digit.

To calculate the Check Digit, the System performs the following steps: 1) Consecutively multiply the numeric value of each of positions 2-7; 2) Consecutively multiply

the numeric value of each of positions 8 - 12; 3) Add both results; 4) Divide by 31; 5) Convert the remainder value to a Base-33 number. The converted value is the Check Digit.

Referring to FIG. 5 once again, when a Shipper/User ships a package using the System, one or more of the System's Servers, e.g., 21a-21n create a new System tracking number. When a new System tracking number is created, one of the System's Database Servers, e.g., 20a-20n, adds a new package record with the newly created System tracking number to a Package Table 28.

The Package Table 28 resides in the System database 22 and contains package records for System processed packages. An exemplary embodiment of the Package Table contains the following information: 1) Package Tracking State ID; 2) Package Shipping State ID; 3) Actual Delivery Time; 4) Delivered To information; 5) Shipping Date; 6) Carrier Tracking Number; 7) System Tracking Number; 8) Carrier ID; 9) Actual Package Weight; 10) Service Description; and 11) Package OID. The content of these fields are described further below.

The Package Tracking State ID specifies the tracking state of the package. In an exemplary embodiment of the invention, there are four different tracking states: 1) Null (New Packages or Shipped Packages); 2) Manifested (at the end of each day, package information is moved to the Package History Table for tracking purposes); 3) In Transit (The Carrier has picked up packages); 4) Delivered (Packages have been delivered to the shipping destination).

The Package Shipping State ID specifies the shipping state of a package. In an exemplary embodiment of the invention, there are two different shipping states: 1) Shipped (New Packages or Shipped Packages); 2) Manifested (at the end of each day, package information is moved to the Package History Table for tracking purposes).

The Actual Delivery Time specifies the Date/Time that the package was actually delivered. The Delivered To information identifies the person or place to which the package was delivered (e.g., left with receptionist, receptionist front desk, or guard). The Ship Date specifies the date on which the Carrier picked up the package. The Carrier Tracking Number identifies the Carrier-specific package tracking number. The System Tracking Number specifies the unique Package tracking number internally generated by the System (each

1 System tracking number corresponds to exactly one Carrier-specific tracking number). The  
2 Carrier ID specifies an identification code for the particular Carrier. The Actual Package  
3 Weight specifies the actual weight of the package as opposed to the billed weight. The  
4 Service Description describes the type of services used to ship the package e.g., Overnight, 3  
5 Day Ground, Second Day Air, etc. The Package OID contains a Globally Unique Identifier  
6 (“GUID”) for each package.

7 When the System creates a new package record, the record remains in the Package  
8 Table 28 during an initial period of time, for example, the first day during which the record is  
9 created, so that the Shipper/User can modify information about the package or void the  
10 package record as appropriate. In an exemplary embodiment of invention, the System  
11 performs certain processing on a periodic basis, such as at the end of each business day. This  
12 type of processing is referred to herein as “End Of Day” processing. In an exemplary  
13 embodiment of the invention, during “End of Day” processing, the System removes all new  
14 package records from the Package Table 28 and moves the records to a Package History Table  
15 29 which also resides on the System Database 22. In an exemplary embodiment, Package  
16 History Table 29 records contain the same data fields as described above regarding Package  
17 Table 28 records.

18 FIG. 68 is a graphic representation of a Shipper online user input screen that is  
19 displayed on the Shipper’s display screen 10. If a Shipper/User wants to track a particular  
20 package, the Shipper/User enters the tracking number that identifies the particular parcel  
21 package of interest in the “Enter tracking number” field 2035. It should be understood by  
22 those with ordinary skill in the art that the User may be someone other than the Shipper. For  
23 instance, the User may be a Recipient who wishes to track a package being sent to the user.  
24 Once the User has entered a tracking number, the User submits a request to track the  
25 particular package identified by clicking on the Submit button 2036.

26 FIG. 69 is a logic flow diagram that depicts the high level logic for tracking the status  
27 of a particular package. The User enters 2018a and 2018b a tracking number 19 in the  
28 tracking number field 2035 (as was shown in FIG. 68). The System first validates 2050 the

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1 tracking number 19. The System performs the validation process by attempting to access the  
2 record on the System database 22 that is associated with the tracking number 19. To do this,  
3 the System requests that a System database server, e.g., 20a (as depicted in FIG. 5) locate and  
4 retrieve the package record that is associated with the tracking number 19. The System  
5 database server, e.g., 20a as depicted in, e.g., FIG. 5, uses the entered tracking number 19 to  
6 search the System database 22 to locate and retrieve the specified package record. In one  
7 embodiment, the System database server, e.g., 20a as depicted in, e.g., FIG. 5, is programmed  
8 to perform database accesses using Sequel 7.0.

9 Through the validation process, the System determines whether the tracking number  
10 19 is a System tracking number or a Carrier tracking number. Below are examples of Carrier  
11 tracking numbers.

12 UPS - 1z8595610344113190

13 Airborne - 3918984344

14 FedEx - 811152682326

15 USPS - ej585489546us

16 Yellow Freight - 2100003475

17 If a user enters a Carrier tracking number as the tracking number 19, then depending upon the  
18 status of the package, or the number of times that the package was tracked, there may be no  
19 information in the System database 22 for the Carrier tracking number. In such a case, the  
20 System then uses algorithms provided by each Carrier to determine the Carrier identification.

21 If the System determines that there is information about the package on the System  
22 database 22, then the System analyzes the Package Shipping State. If the Package Shipping  
23 State of the retrieved record is "Manifested" or "In Transit" and the Package Tracking State is  
24 not "Delivered", then the System prepares to track the package using the appropriate Carrier  
25 system. If the Package Shipping State of the retrieved record is "Delivered", or other final  
26 status, then the System reports the status of the package to the user.

27 If the tracking number 19 is a valid System tracking number, then the System extracts the

Carrier's tracking number and Carrier's ID from the package record retrieved from the System database 22 before issuing a request 2054. Otherwise, if the tracking number 19 is a Carrier tracking number, then the System extracts the Carrier's ID from the package record before issuing a request 2052 to the Carrier's Internet system. The System uses the Carrier's ID to retrieve from the System database 22 the Internet URL for the Carrier's Internet web site. The URL information is configurable.

Returning for a moment to FIG. 5, using the Carrier's Internet URL, the System then makes an HTTP connection to the Carrier's web server, e.g., 23-2, 24-2, 25-2, 26-2, or 27-2, using the URL information for the particular Carrier's web server. Depending upon the Carrier, the System's 1 request and report interface with the Carrier's web server is programmed in HyperText Markup Language ("HTML") (e.g., 24-1, 25-1, 27-1), Extensible Markup Language ("XML") (e.g., 26-1), or both HTML and XML (e.g., 23-1). FIG. 66 depicts an exemplary XML formatted request for submitting a tracking request to a Carrier. FIG. 67 depicts an exemplary successful tracking response, also in XML format, returned by the Carrier.

Then, as depicted in FIG. 69, the System transmits the Carrier's tracking number over the HTTP connection (2052 or 2054). The System instructs the Carrier's web server as to what information is requested based on the connection made using the URL.

If the Carrier's web server successfully responds 2055 to the System's 1 tracking request, the System disconnects from the Carrier's web server and parses the response data. Some Carriers' response data contains unnecessary text information. The System strips out all of the unnecessary text in order to parse the relevant information.

If the System database 22 does not have any previous record of the package, such as would be the case if the package had not been shipped using the System shipping application, then the System does not store any data about the package in the Package Table or the Package History Table.

Otherwise, the System then updates the System database 22 and reports the information to the Shipper/User 2056. If the package is reported as delivered, the System

1 populates the Package History Table 29 in the System database. As was previously  
2 mentioned, in an exemplary embodiment, Package History Table 29 records contain the same  
3 data fields as described above regarding Package Table 28 records.

4 If on the other hand, the Carrier's Internet web server returns an unsuccessful report,  
5 the System reports the failure to the User. FIG. 70 is a graphic representation of an exemplary  
6 unsuccessful tracking report to the User. The Tracking Failure Report Screen as depicted in  
7 FIG. 70 informs the User that the System was unable to track the package 2060 and displays  
8 2061 the package tracking number 19 that the User previously entered. The Tracking Failure  
9 Report Screen asks the User to verify the accuracy of the tracking number and to specify a  
10 Carrier by name 2062. The Tracking Failure Report Screen provides a pull down menu  
11 button 2063, that when clicked, displays a list 2064 of the supported Carriers. The user enters  
12 a new tracking number 19 in the tracking number field 2035 and specifies the Carrier by  
13 highlighting one of the Carriers displayed in the list 2064. The user submits the request by  
14 clicking on the Submit button 2036 (covered by the pull down selection list 2064 in FIG. 70).

15 If the Carrier's system successfully returns tracking information, then the System  
16 displays the package's current status. As depicted in FIG. 71, if the package has a "Delivered"  
17 status, the System reports the Status 2071; status as of Last Scan including date time and  
18 location 2072; Delivered To location 2073; Delivery Date 2074; Delivery Time 2075;  
19 Delivery Location 2076; Signed by 2077; Carrier Name 2078; Service 2079 and Tracking  
20 Number 2080.

21 Status 2071 reports the Delivery Status, also referred to as the Track, or Tracking,  
22 State. Last Scan 2072 reports Last scan information for the particular package. When a  
23 package is moved from one location to another, the label of the package is scanned according  
24 to each Carrier's processing requirements. Also, many Carriers scan package labels when  
25 packages are received by the recipients. Delivered To 2073 reports the person or place to  
26 which the package was delivered (e.g., left with receptionist, receptionist front desk, or  
27 guard). Delivery Date 2074 reports the date on which the package was delivered. Delivery  
28 Location 2076 reports, for most carriers, the city, zip code, and state information for the



1 location to which the package was delivered. However, for some carriers, such as UPS, the  
 2 delivery location reports where the package was dropped off (e.g., front porch, front door).  
 3 Signed By 2077 reports the name of the person who signed the package after receiving it.  
 4 Carrier 2078 reports the name of the Carrier that delivered the package. Service 2079 reports  
 5 the type of shipping service (i.e., Ground). Tracking Number 2080 reports the System  
 6 tracking number or carrier tracking number entered by the User.

7 The User is invited to enter another tracking number 19 in the tracking number field  
 8 2035 and click the Submit button 2036 to submit the next tracking request.

9 As depicted in FIG. 72, if the package has not yet been delivered, the System reports  
 10 the information available, e.g., the Status 2071, Last Scan 2072, Carrier 2078 and Tracking  
 11 number 2080. In such a case, the System asks the User if the User want to be notified when  
 12 the identified package is delivered. The System provides the User with input fields to register  
 13 to receive, and have sent, e-mail notification after the package is delivered. A user can enter  
 14 up to three names, 2091, 2093 and 2095, and up to three e-mail addresses, 2092, 2094, and  
 15 2096, to receive the delivery confirmation. The User submits the e-mail notification by  
 16 clicking on the Submit button 2036-1.

17 If the User completes the e-mail notification input fields with at least one e-mail name  
 18 and address, e.g., 2091 and 2092, the System creates an entry in a Track Response Table 30  
 19 which is a table contained in the System Database 22 as depicted in FIG. 5. The Track  
 20 Response Table entry contains the tracking number 19 earlier specified by the User and  
 21 displayed 2080 in the Tracking Report Screen depicted in FIG. 72. The System uses the  
 22 Track Response Table 30. The System performs Automatic Tracking for all of the package  
 23 tracking numbers contained in the Track Response Table 30 at the time that the Automatic  
 24 Tracking procedure is executed. Automatic Tracking is described in more detail below.

25 The User can then enter another tracking number 19 in the tracking number field 2035  
 26 and submit the new request by clicking on the Submit button 2036-2. When the Carrier  
 27 delivers the package, the System detects the delivery through one of several ways, as will be  
 28 further explained below, and then sends e-mail with a link to the web page with the most up to

1 date package status.

2 In an alternative embodiment, if the tracking number 19 is a Carrier tracking number,  
3 the Server will validate the Carrier tracking number is a valid tracking number. If the Carrier  
4 tracking number is not a valid number, the Server will return an invalid tracking number  
5 error. If the Carrier tracking number is a valid number, the Server will not attempt to match  
6 the number to a manifested package; the Server will track the package using the particular  
7 Carrier's Internet tracking routine; and will return the tracking response to the Web Client of  
8 the requesting Shipper/User.

9 In an alternative embodiment, if the tracking number 19 is a System tracking number,  
10 then the System validates the System tracking number to ensure that it is a valid System  
11 tracking number. If the System tracking number is not a valid tracking number, the Server  
12 will return an invalid tracking number error. If the System tracking number is a valid tracking  
13 number the Server queries the System database 22 to find the Carrier tracking number which  
14 corresponds to the System tracking number. If no package record is found for the System  
15 tracking number, then the Server will return an error to the Web Client of the requesting  
16 Shipper. The error message will indicate that no package record was found; it will request the  
17 user to verify that the tracking number was from a package which had been dropped off notify  
18 the user that a package be tracked on the same day it shipped. If the package record is found  
19 and the actual ship date is the same as the current date, the Server will return an error to the  
20 Web Client of the requesting Shipper indicating that the user/Shipper cannot track the package  
21 on the same day it is shipped.

22 In this alternative embodiment, once the Server has identified the Carrier tracking  
23 number, the Server will track the package using the Carrier's Internet tracking routine. If the  
24 tracking response from the Carrier's Internet tracking routing indicates an error, the Server  
25 will make another attempt to track the package through the Carrier's Internet tracking routine.  
26 If the second tracking request results in an error, the Server will notify the Web Client of the  
27 requesting Shipper that the Carrier is unable to track the package, and will log a tracking  
28 request error containing the Error Log number, the System tracking number, the Carrier

1 tracking number, the time and date the tracking request occurred, the error response reported  
2 by the Carrier, and the Account Name of the user/Shipper making the tracking request, if that  
3 information is available.

4 If, on the other hand, the Carrier returns a valid tracking response, the Server will  
5 update the package status in the Server Database with the tracking response and will return the  
6 detailed package information to the Web Client of the requesting user/Shipper from the  
7 System Database as described below.

8 If the user supplied a Carrier tracking number, the Web Client will display the basic  
9 tracking information provided by the particular Carrier's Internet tracking function. In one  
10 embodiment of the invention, when the user provides a Carrier tracking number to track a  
11 package, the user/Shipper's Web Client requires the user/Shipper to identify the Carrier.

12 If the user/Shipper provides a System tracking number, then if the user/Shipper is  
13 logged on to the account, or otherwise enters valid logon information, that information must  
14 correspond to the Account which shipped the package. In that case, the user/Shipper's Web  
15 Client will display the following information: System tracking number; recipient address;  
16 drop off location; Carrier and service; Carrier tracking number if available; actual ship date if  
17 available; delivery address if available; delivery location if available; delivery date if  
18 available; delivery time if available; signed for by information if available; package rate;  
19 package weight; package dimensions; packaging; customer reference information; all scan  
20 activity.

21 If on the other hand, the user/Shipper is not logged on to the account, fails to enter  
22 valid logon information, or is logged on to an Account which does not correspond to the  
23 Account which shipped the package, the user/Shipper's Web Client will display the following  
24 information: System tracking number; recipient contact name; recipient company name;  
25 Carrier and service; Carrier tracking number if available; actual ship date if available; delivery  
26 address if available; delivery location if available; delivery date if available; delivery time if  
27 available; signed for by information if available; package weight; customer reference  
28 information; all scan activity.

2) AUTOMATIC TRACKING

Automatic Tracking of packages with Priority Delivery Notification is performed when the package meets the following criteria: the package is a manifested package; the package was shipped using Priority Delivery Notification; The actual ship date of the package is the earlier than the current date; the package does not have the status of Delivered or Lost.

Automatic Tracking of a particular package can be requested by the User, as depicted in FIG. 72 and as was described above

If the package fulfills all of the above-described automatic tracking criteria, the System places a record in the Track Response Table 30 and thereafter tracks the package on some regular periodic time interval, for example, every four hours beginning at a staggered start time. The start time is determined randomly and is staggered to occur at regular intervals every four hours.

The System tracks the package using the specified Carrier's Internet tracking routine as was previously described above. If the Carrier's Internet tracking routine returns a tracking response that the tracking request is an error, the Server will track the package at the next staggered tracking time. If the second tracking request response is also an error, the Server will track the package at the next scheduled four hour interval. If the third tracking request fails, the Server will log a tracking request error containing the following information: error log number; System tracking number; Carrier tracking number; time and date the tracking request occurred; and the error response from the Carrier. In the event that the third tracking request fails, the Server will issue an Automatic Tracking Alert, for instance, to System Support, containing the error log number.

If the tracking request results in a successful tracking response, the Server will update the package status in the Package History Table 29 in the System Database 22 with the tracking response information. If the package status returned is Delivered, the Server will send delivery notification via e-mail to the notification address(e), e.g., 2091 - 2096 as depicted in FIG. 72, as previously supplied by the Shipper/User. For a Delivered package, the

1 Server will update the Package History Table 29 in the System Database 22 to indicate that  
2 the package has been delivered, that a delivery notification e-mail has been sent, and the date  
3 and time that the e-mail was sent.

4 If the manifest package was shipped without Priority Delivery Notification, then on  
5 any day after the actual ship date, as long as the status of the package is not Delivered or Lost,  
6 the System will track the package every day at a non-peak period. If the tracking response is  
7 an error, the Server will not attempt a second tracking request. If the tracking response is  
8 successful, the System will update the package status in the System Database 22 with the  
9 tracking response information.

10 The System will verify that all packages with a status of Delivered were delivered  
11 within the guaranteed delivery time. For each Delivered package for which delivery was not  
12 made with the guaranteed delivered time, the Server will generate a Delivery Exception  
13 containing the following information: Carrier account number for the Drop Off Location;  
14 Carrier tracking number; date of shipment; complete destination address information; delivery  
15 exception ID number.

16 In one embodiment of the invention, there are four types of scripts, or procedures, that  
17 run regularly to update the Package History Table 29 and the Track Response Table 30 in the  
18 System database 22: 1) Track All Scripts, 2) Track Inbound Script, 3) Inbound Confirmation  
19 Mail Script and 4) Delivery Confirmation Script. Each is described further below.

20 Track All Scripts are run on a regular basis. There is a Track All script for each  
21 Carrier (e.g., FedEx, UPS, Airborne, and Yellow Freight). Each Track All script executes a  
22 set of instructions that enumerate the package records in the Package History Table 29 to get  
23 updated information from a specific Carrier's database. If a System tracking number has a  
24 delivered tracking state, then the next time a user tries to get tracking information for this  
25 particular tracking number, the System will not need to connect to the Carrier's web server to  
26 get the package status information.

27 Track Inbound Script is run on a regular basis. Track Inbound Script searches the  
28 Track Response Table 30 and enumerates all entries in the table to get updated information

1 from multiple Carriers' databases. If a tracking number has a delivered tracking state, then  
2 Users are notified via e-mail that their packages have been delivered. Also, if the tracking  
3 number is a System tracking number then the Package History Table 29 gets updated with this  
4 delivered tracking state information for optimization purposes. By updating the Package  
5 History Table 29, the System does not need to re-connect to carriers' web servers to get  
6 information about a package that has been already delivered.

7 Inbound Confirmation Mail Script is run on a regular basis. It searches the Track  
8 Response Table 30 for packages that have a delivered track state. When the script finds  
9 delivered packages for Users who requested to receive e-mail notifications, it sends e-mail  
10 notifications to them with delivery information.

11 Delivery Confirmation Script is run on a regular basis. It searches the Package History  
12 Table 29 and enumerates all entries in the table for which the User has requested delivery  
13 notification when the subject package has been delivered to destination. When the script finds  
14 delivered packages in the Package History Table 29 for Users who requested to receive e-mail  
15 notifications, it sends e-mail notifications to them with delivery information.

### 16 17 3.) COUNTER MANIFEST SYSTEM (CMS) TRACKING

18 As an alternative to using an Internet embodiment of the invention, a user can track  
19 packages by using the counter Manifest System CMS feature of the invention. In such an  
20 embodiment, CMS is a standalone-dedicated system that uses a connection to one of the  
21 System's servers (the "CMS Server") to track packages. CMS can be connected to one of the  
22 System servers in many different ways, including among others, DSL dial-up, ISDN dial-up,  
23 Modems, T1 line, Hughes VSAT link or other communications systems.

24 In the CMS environment, a company maintains a connection for the CMS to the CMS  
25 Server to track packages for customers. The CMS User track packages for the CMS User's  
26 customers by entering a tracking number in the CMS tracking page. CMS tracking allows a  
27 customer to register for a delivery confirmation to receive e-mail notifications when packages  
28 are delivered. Also, customers can register using the System's Internet embodiment to receive

inbound delivery notifications for the packages that are shipped using the CMS.

FIG. 73 is a graphic representation of an exemplary CMS online user input screen. The User inputs a tracking number 19 in the input tracking number field 2100 and submits a request to the System to track the package associated with the input tracking number 19 by clicking on the “Track” button 2102.

FIG. 74 is a graphic representation of an exemplary CMS display screen that reports a successful tracking result 2103. After reading the tracking report, the User can request that another package be tracked by clicking the “Track Another” button 2104.

FIG. 75 is a graphic representation of an exemplary CMS error tracking report display screen. The tracking number 19 is displayed with an error message 2105. The user can request that another package be tracked by clicking the “Track Another” button 2104.

#### 4.) MANIFEST AND INBOUND TRACKING

A User can register with the System to establish a shipping account. Once a User has established an account, the System will record in the System database 22 information for every package shipped under the User’s account. The information contained in the System database 22 under the User’s account is referred to as the User’s Shipping Log.

The System provides the User with online capability to request information about the User’s Shipping Log. FIG. 76 is a graphic representation of an exemplary embodiment of a “My Tracking” Screen. On the viewer’s left side of the My Tracking Screen display, a “My Tracking submenu 2110 is provided to allow the User to select options. By clicking on and highlighting one of the My Tracking submenu 2110 options, the User can select to view the User’s Account’s Shipping Log 2111, to View Inbound Packages 2112, to Add Inbound Packages 2113, and to indicate Tracking Preferences 2114. The User can also input a tracking number 19 into the Quick Track input field 2115 and request that the System track the identified package by clicking the “go” button 2116.

FIG. 77 is a graphic representation of an exemplary embodiment of a Shipping Log

1 Screen. A logged on registered User enters this display screen by clicking on the My  
2 Tracking submenu 2110 User's Account's Shipping Log option 2111. If the User is both  
3 logged on and registered, then in response to the User clicking on the My Tracking submenu  
4 2110, User's Account's Shipping Log option 2111, the System presents a Shipping Log  
5 Screen with certain selection criteria. In the embodiment depicted in FIG. 77, the System  
6 initializes selection criteria fields with certain default values. For instance, the Shipping Log  
7 will search the system database 22 for the name of the individual to whom the particular  
8 account belongs and displays the name of the person 2109. Further, the Shipping Log  
9 application will search the System database 22 for all packages shipped under the User's  
10 account that conform to the criteria specified in the input fields of the FIG. 77 screen.

11 The Shipping Log Screen provides for User selection of the Type of package, e.g.,  
12 "All Packages" from the Display option 2118 and Display option pull-down menu button  
13 2117; "For the Past" time period 2119, e.g., for the past "Month" during which packages were  
14 shipped; and "Sort By" 2121-2122 which allows the User to select the order of the Shipping  
15 Log report entries.

16 In response to the Shipping Log request, the System creates a list and displays an  
17 online Shipping Log record for the packages shipped under the User's account and which fit  
18 the selection criteria. For each such package, the System displays: the Status of the package  
19 2125 and the tracking number 2080, the name of the shipper 2126, the Carrier Service 2127,  
20 the name of the Carrier 2128, the Ship Date 2129, and the Delivery Date and time 2129-2130.  
21 If the User wants more information for a particular package in the Shipping Log, the User  
22 highlights the appropriate record in the list and clicks the "Details" button 2124.

23 FIG. 78 is a graphic representation of an exemplary embodiment of a Detailed  
24 Shipping Log Entry Screen which is displayed if the User highlights the appropriate record in  
25 the Shipping Log list and clicks the "Details" button 2124. The System displays the Shipping  
26 Log date and time 2140, the System tracking number 2141, the estimated weight of the  
27 package 2142, the billed weight of the package 2143, the Packaging type 2144, the Carrier  
28 and Service 2145, a description of the goods shipped 2146, the shipping status 2071, the



Carrier tracking number 2080, the Shipped Date 2147, the Expected data of arrival 2148, the Last Scan information 2072, the Recipient's name and address 2149, the Return name and address 2150, the Ship from location 2153, the base shipping service charge 2151, and the total shipping charge 2152.

FIG. 79 is a graphic representation of an exemplary embodiment of a detailed "Quick Track" result screen which displays the same type of information described above for FIG. 78. The way that a User obtains this display is to enter a tracking number 19 into the Quick Track input field 2115, and by then clicking on the "go" button 2116.

A registered logged on User can view inbound packages if the User first identifies to the System package tracking numbers for each of the packages the status of which the User is interested in monitoring. FIG. 80 is a graphic display of an exemplary embodiment of an "Add Inbound Packages" Screen. The User requests this screen by clicking on the "Add Inbound Package" option 2113 of the "My Tracking" submenu 2110. The User inputs identification information, such as the tracking number 19 in the input tracking number field 2035, the Carrier 2128, and the Order/Item 2161. The User can also specify that the System is to provide e-mail notification 2162 with an e-mail message 2163. By clicking on the "E-mail Others" button, the User can request an "E-mail Others" screen providing input similar to that, items 2091-2097, and 2036-1, described above for the tracking screen depicted in FIG. 72. By clicking on the "Add" button 2165, the User requests that the record identified in the User's input be added to a list for that User of Inbound Packages to be monitored.

Once the User has input the identification information for the packages the status of which the User wants to monitor, and added all such records to the User's Inbound Tracking List, the User can then view the status of those identified Inbound packages. To do so, the user clicks on the "View Inbound Packages" option 2112 of the "My Tracking" submenu 2110. FIG. 81 is a graphic representation of an exemplary embodiment of a "View Inbound Packages" Summary Screen. Similar to the Shipping Log Screen as discussed above in relation to FIG. 77, the View Inbound Packages Summary Screen displays information about packages identified by the User as Inbound Packages. As depicted on FIG. 81, the User can

1 specify reporting criteria such as Display limitations 2117-2118, and sorting requests 2121-  
2 2122. The User can request details about a particular package by highlighting the reporting  
3 line on the screen and clicking the "Details" button 2124. The User can delete a particular  
4 package from Inbound Package Tracking by highlighting the reporting line on the screen and  
5 clicking the "Delete" button 2170.

6 FIG. 82 is a graphic representation of a View Inbound Packages Detail Screen. The  
7 type of information displayed on this screen is similar to the type of information described  
8 with respect to the Shipping Log Detail Screen as depicted in FIG. 78 and discussed above.

9  
10 ILLUSTRATIVE EMBODIMENTS

11 Although this invention has been described in certain specific embodiments, many  
12 additional modifications and variations would be apparent to those skilled in the art. It is,  
13 therefore, to be understood that this invention may be practiced otherwise than as specifically  
14 described. Thus, the embodiments of the invention described herein should be considered in  
15 all respects as illustrative and not restrictive, the scope of the invention to be determined by  
16 the appended claims and their equivalents rather than the foregoing description.

WHAT IS CLAIMED IS:

1. A shipping management computer system, said shipping management computer system programmed to:  
apply, in response to a request by any particular user of a plurality of users, dimensional weight calculation rules for each of a plurality of carriers to a set of parcel specifications for a particular parcel input by the particular requesting user, wherein each user accesses the computer system over a global communications network using a client computer device, each user client computer device having an individual electronic connection to the global communications network.

2. A shipping management computer system, said shipping management computer system programmed to:  
identify, in response to a request by any particular user of a plurality of users, each carrier from a plurality of carriers that supports shipping a particular parcel wherein the particular parcel is characterized by a set of parcel characteristics, wherein said set of parcel characteristics translate into a particular calculated dimensional weight according to dimensional weight calculation rules for each of the plurality of carriers, wherein each user accesses the computer system over a global communications network using a client computer device, each user client computer device having an individual electronic connection to the global communications network.

3. A shipping management computer system, said shipping management computer system programmed to:  
calculate, in response to a request by any particular user of a plurality of users, a dimensional weight for a particular parcel for each carrier from a plurality of carriers according to dimensional weight calculation rules for each of the plurality of carriers, wherein the particular parcel is characterized by a set of parcel characteristics input by the particular requesting user, wherein each user accesses the computer system over a global

1 communications network using a client computer device, each user client computer device  
2 having an individual electronic connection to the global communications network.

3  
4 4. The shipping management computer system of Claim 3, said shipping  
5 management computer system further programmed to:  
6 compare the calculated dimensional weight of the particular parcel calculated for each  
7 carrier to a set of dimensional weight limitations for the carrier;  
8 identify as a supporting carrier each carrier for which the calculated dimensional  
9 weight of the particular parcel calculated for the carrier does not exceed a set of dimensional  
10 weight limitations for the carrier.

11  
12 5. The shipping management computer system of Claim 4, said shipping  
13 management computer system further programmed to:  
14 calculate for each of a plurality of services offered by each supporting carrier a  
15 shipping rate for shipping the particular parcel.

16  
17 6. The shipping management computer system of Claim 5, said shipping  
18 management computer system further programmed to:  
19 calculate the shipping rate for the particular parcel for each service offered by each  
20 supporting carrier according to a set of parcel shipping pricing rules for each particular  
21 service offered by the particular supporting carrier as applied to the set of parcel  
22 specifications and to the calculated dimensional weight for the particular parcel and as  
23 applied to an origin zip code and an exemplary destination zip code input by the particular  
24 user.

25  
26 7. The shipping management computer system of Claim 6, said shipping  
27 management computer system further programmed to:  
28 generate an online comparison display of the calculated shipping rates to a display  
29 monitor configured with the client computer device of the particular user.

1  
2           8.       A method using a computer system for managing shipping of a plurality of  
3 parcels shipped by any one of a plurality of carriers, the method comprising:  
4           applying, in response to a request by any particular user of a plurality of users,  
5 dimensional weight calculation rules for each of a plurality of carriers to a set of parcel  
6 specifications for a particular parcel input by the particular requesting user, wherein each user  
7 accesses the computer system over a global communications network using a client computer  
8 device, each user client computer device having an individual electronic connection to the  
9 global communications network.

10  
11           9.       A method using a computer system for managing shipping of a plurality of  
12 parcels shipped by any one of a plurality of carriers, the method comprising:  
13           identifying, in response to a request by any particular user of a plurality of users, each  
14 carrier from a plurality of carriers that supports shipping a particular parcel wherein the  
15 particular parcel is characterized by a set of parcel characteristics, wherein said set of parcel  
16 characteristics translate into a particular calculated dimensional weight according to  
17 dimensional weight calculation rules for each of the plurality of carriers, wherein each user  
18 accesses the computer system over a global communications network using a client computer  
19 device, each user client computer device having an individual electronic connection to the  
20 global communications network.

21  
22           10.      A method using a computer system for managing shipping of a plurality of  
23 parcels shipped by any one of a plurality of carriers, the method comprising:  
24           calculating, in response to a request by any particular user of a plurality of users, a  
25 dimensional weight for a particular parcel for each carrier from a plurality of carriers  
26 according to dimensional weight calculation rules for each of the plurality of carriers,  
27 wherein the particular parcel is characterized by a set of parcel characteristics input by the  
28 particular requesting user, wherein each user accesses the computer system over a global  
29 communications network using a client computer device, each user client computer device

1 having an individual electronic connection to the global communications network.

2  
3 11. The method of Claim 10, said method further comprising:  
4 comparing the calculated dimensional weight of the particular parcel calculated for  
5 each carrier to a set of dimensional weight limitations for the carrier;  
6 identifying as a supporting carrier each carrier for which the calculated dimensional  
7 weight of the particular parcel calculated for the carrier does not exceed a set of dimensional  
8 weight limitations for the carrier.

9  
10 12. The method of Claim 11, said method further comprising:  
11 calculating for each of a plurality of services offered by each supporting carrier a  
12 shipping rate for shipping the particular parcel.

13  
14 13. The method of Claim 12, said method further comprising:  
15 calculating the shipping rate for the particular parcel for each service offered by each  
16 supporting carrier according to a set of parcel shipping pricing rules for each particular  
17 service offered by the particular supporting carrier as applied to the set of parcel  
18 specifications and to the calculated dimensional weight for the particular parcel and as  
19 applied to an origin zip code and an exemplary destination zip code input by the particular  
20 user.

21  
22 14. The method of Claim 13, said method further comprising:  
23 generating an online comparison display of the calculated shipping rates to a display  
24 monitor configured with the client computer device of the particular user.

25  
26 15. A computer program product embodying computer program instructions for  
27 execution by a computer system for managing shipping of a plurality of parcels shipped by  
28 any one of a plurality of carriers, the computer program product comprising:  
29 a set of program instructions for applying, in response to a request by any particular

1 user of a plurality of users, dimensional weight calculation rules for each of a plurality of  
2 carriers to a set of parcel specifications for a particular parcel input by the particular  
3 requesting user, wherein each user accesses the computer system over a global  
4 communications network using a client computer device, each user client computer device  
5 having an individual electronic connection to the global communications network.  
6

7 16. A computer program product embodying computer program instructions for  
8 execution by a computer system for managing shipping of a plurality of parcels shipped by  
9 any one of a plurality of carriers, the computer program product comprising:

10 a set of program instructions for identifying, in response to a request by any particular  
11 user of a plurality of users, each carrier from a plurality of carriers that supports shipping a  
12 particular parcel wherein the particular parcel is characterized by a set of parcel  
13 characteristics, wherein said set of parcel characteristics translate into a particular calculated  
14 dimensional weight according to dimensional weight calculation rules for each of the  
15 plurality of carriers, wherein each user accesses the computer system over a global  
16 communications network using a client computer device, each user client computer device  
17 having an individual electronic connection to the global communications network.  
18

19 17. A computer program product embodying computer program instructions for  
20 execution by a computer system for managing shipping of a plurality of parcels shipped by  
21 any one of a plurality of carriers, the computer program product comprising:

22 a set of program instructions for calculating, in response to a request by any particular  
23 user of a plurality of users, a dimensional weight for a particular parcel for each carrier from  
24 a plurality of carriers according to dimensional weight calculation rules for each of the  
25 plurality of carriers, wherein the particular parcel is characterized by a set of parcel  
26 characteristics input by the particular requesting user, wherein each user accesses the  
27 computer system over a global communications network using a client computer device, each  
28 user client computer device having an individual electronic connection to the global  
29 communications network.

1           18.     The computer program product of Claim 17, said computer program product  
2 further comprising:

3           a set of program instructions for comparing the calculated dimensional weight of the  
4 particular parcel calculated for each carrier to a set of dimensional weight limitations for the  
5 carrier;

6           a set of program instructions for identifying as a supporting carrier each carrier for  
7 which the calculated dimensional weight of the particular parcel calculated for the carrier  
8 does not exceed a set of dimensional weight limitations for the carrier.  
9

10           19.     The computer program product of Claim 18, said computer program product  
11 further comprising:

12           a set of program instructions for calculating for each of a plurality of services offered  
13 by each supporting carrier a shipping rate for shipping the particular parcel.  
14

15           20.     The computer program product of Claim 19, said computer program product  
16 further comprising:

17           a set of program instructions for calculating the shipping rate for the particular parcel  
18 for each service offered by each supporting carrier according to a set of parcel shipping  
19 pricing rules for each particular service offered by the particular supporting carrier as applied  
20 to the set of parcel specifications and to the calculated dimensional weight for the particular  
21 parcel and as applied to an origin zip code and an exemplary destination zip code input by the  
22 particular user.  
23

24           21.     The computer program product of Claim 20, said computer program product  
25 further comprising:

26           a set of program instructions for generating an online comparison display of the  
27 calculated shipping rates to a display monitor configured with the client computer device of  
28 the particular user.  
29



1           22.     A shipping management computer system, said shipping management  
2 computer system programmed to:

3           apply, in response to a request by any particular user of a plurality of users, Billable  
4 weight determination rules for each of a plurality of carriers to a set of parcel specifications  
5 for a particular parcel input by the particular requesting user and to a dimensional weight for  
6 the particular parcel determined by the computer system, wherein each user accesses the  
7 computer system over a global communications network using a client computer device, each  
8 user client computer device having an individual electronic connection to the global  
9 communications network.

11           23.     A shipping management computer system, said shipping management  
12 computer system programmed to:

13           identify, in response to a request by any particular user of a plurality of users, each  
14 carrier from a plurality of carriers that supports shipping a particular parcel wherein the  
15 particular parcel is characterized by a set of parcel characteristics and a dimensional weight  
16 calculated by the computer system for each carrier, wherein said set of parcel characteristics  
17 and said dimensional weight for each carrier translate into a particular determined billable  
18 weight according to billable weight determination rules for each of the plurality of carriers,  
19 wherein each user accesses the computer system over a global communications network  
20 using a client computer device, each user client computer device having an individual  
21 electronic connection to the global communications network.

23           24.     A shipping management computer system, said shipping management  
24 computer system programmed to:

25           determine, in response to a request by any particular user of a plurality of users, a  
26 billable weight for a particular parcel for each carrier from a plurality of carriers according to  
27 billable weight determination rules for each of the plurality of carriers, wherein the particular  
28 parcel is characterized by a set of parcel characteristics input by the particular requesting user  
29 and by a dimensional weight calculated by the computer system for each carrier, wherein

1 each user accesses the computer system over a global communications network using a client  
2 computer device, each user client computer device having an individual electronic connection  
3 to the global communications network.  
4

5 25. The shipping management computer system of Claim 24, said shipping  
6 management computer system further programmed to:

7 identify as a supporting carrier each carrier that supports shipping of the particular  
8 parcel according to a set of acceptable parcel characteristics rules for each particular carrier.  
9

10 26. The shipping management computer system of Claim 25, said shipping  
11 management computer system further programmed to:

12 calculate for each of a plurality of services offered by each supporting carrier a  
13 shipping rate for shipping the particular parcel.  
14

15 27. The shipping management computer system of Claim 26, said shipping  
16 management computer system ifurther programmed to:

17 calculate the shipping rate for the particular parcel for each service offered by each  
18 supporting carrier according to a set of parcel shipping pricing rules for each particular  
19 service offered by the particular supporting carrier as applied to the set of parcel  
20 specifications and to the determined billable weight for the particular parcel and as applied to  
21 an origin zip code and an exemplary destination zip code input by the particular user.  
22

23 28. The shipping management computer system of Claim 27, said shipping  
24 management computer system further programmed to:

25 generate an online comparison display of the calculated shipping rates to a display  
26 monitor configured with the client computer device of the particular user.  
27

28 29. A method using a computer system for managing shipping of a plurality of  
29 parcels shipped by any one of a plurality of carriers, the method comprising:

1 applying, in response to a request by any particular user of a plurality of users,  
2 Billable weight determination rules for each of a plurality of carriers to a set of parcel  
3 specifications for a particular parcel input by the particular requesting user and to a  
4 dimensional weight for the particular parcel determined by the computer system, wherein  
5 each user accesses the computer system over a global communications network using a client  
6 computer device, each user client computer device having an individual electronic connection  
7 to the global communications network.

8  
9 30. A method using a computer system for managing shipping of a plurality of  
10 parcels shipped by any one of a plurality of carriers, the method comprising:  
11 identifying, in response to a request by any particular user of a plurality of users, each  
12 carrier from a plurality of carriers that supports shipping a particular parcel wherein the  
13 particular parcel is characterized by a set of parcel characteristics and a dimensional weight  
14 calculated by the computer system for each carrier, wherein said set of parcel characteristics  
15 and said dimensional weight for each carrier translate into a particular determined billable  
16 weight according to billable weight determination rules for each of the plurality of carriers,  
17 wherein each user accesses the computer system over a global communications network  
18 using a client computer device, each user client computer device having an individual  
19 electronic connection to the global communications network.

20  
21 31. A method using a computer system for managing shipping of a plurality of  
22 parcels shipped by any one of a plurality of carriers, the method comprising:  
23 determining, in response to a request by any particular user of a plurality of users, a  
24 billable weight for a particular parcel for each carrier from a plurality of carriers according to  
25 billable weight determination rules for each of the plurality of carriers, wherein the particular  
26 parcel is characterized by a set of parcel characteristics input by the particular requesting user  
27 and by a dimensional weight calculated by the computer system for each carrier, wherein  
28 each user accesses the computer system over a global communications network using a client  
29 computer device, each user client computer device having an individual electronic connection

1 to the global communications network.

2  
3 32. The method of Claim 31, said method further comprising:  
4 identifying as a supporting carrier each carrier that supports shipping of the particular  
5 parcel according to a set of acceptable parcel characteristics rules for each particular carrier.

6  
7 33. The method of Claim 32, said method further comprising:  
8 calculating for each of a plurality of services offered by each supporting carrier a  
9 shipping rate for shipping the particular parcel.

10  
11 34. The method of Claim 33, said method further comprising:  
12 calculating the shipping rate for the particular parcel for each service offered by each  
13 supporting carrier according to a set of parcel shipping pricing rules for each particular  
14 service offered by the particular supporting carrier as applied to the set of parcel  
15 specifications and to the determined billable weight for the particular parcel and as applied to  
16 an origin zip code and an exemplary destination zip code input by the particular user.

17  
18 35. The method of Claim 34, said method further comprising:  
19 generating an online comparison display of the calculated shipping rates to a display  
20 monitor configured with the client computer device of the particular user.

21  
22 36. A computer program product embodying computer program instructions for  
23 execution by a computer system for managing shipping of a plurality of parcels shipped by  
24 any one of a plurality of carriers, the computer program product comprising:  
25 a set of program instructions for applying, in response to a request by any particular  
26 user of a plurality of users, Billable weight determination rules for each of a plurality of  
27 carriers to a set of parcel specifications for a particular parcel input by the particular  
28 requesting user and to a dimensional weight for the particular parcel determined by the  
29 computer system, wherein each user accesses the computer system over a global

1 communications network using a client computer device, each user client computer device  
2 having an individual electronic connection to the global communications network.

3  
4 37. A computer program product embodying computer program instructions for  
5 execution by a computer system for managing shipping of a plurality of parcels shipped by  
6 any one of a plurality of carriers, the computer program product comprising:

7 a set of program instructions for identifying, in response to a request by any particular  
8 user of a plurality of users, each carrier from a plurality of carriers that supports shipping a  
9 particular parcel wherein the particular parcel is characterized by a set of parcel  
10 characteristics and a dimensional weight calculated by the computer system for each carrier,  
11 wherein said set of parcel characteristics and said dimensional weight for each carrier  
12 translate into a particular determined billable weight according to billable weight  
13 determination rules for each of the plurality of carriers, wherein each user accesses the  
14 computer system over a global communications network using a client computer device, each  
15 user client computer device having an individual electronic connection to the global  
16 communications network.

17  
18 38. A computer program product embodying computer program instructions for  
19 execution by a computer system for managing shipping of a plurality of parcels shipped by  
20 any one of a plurality of carriers, the computer program product comprising:

21 a set of program instructions for determining, in response to a request by any  
22 particular user of a plurality of users, a billable weight for a particular parcel for each carrier  
23 from a plurality of carriers according to billable weight determination rules for each of the  
24 plurality of carriers, wherein the particular parcel is characterized by a set of parcel  
25 characteristics input by the particular requesting user and by a dimensional weight calculated  
26 by the computer system for each carrier, wherein each user accesses the computer system  
27 over a global communications network using a client computer device, each user client  
28 computer device having an individual electronic connection to the global communications  
29 network.

1           39.     The computer program product of Claim 38, said computer program product  
2 further comprising:

3           a set of program instructions for identifying as a supporting carrier each carrier that  
4 supports shipping of the particular parcel according to a set of acceptable parcel  
5 characteristics rules for each particular carrier.  
6

7           40.     The computer program product of Claim 39, said computer program product  
8 further comprising:

9           a set of program instructions for calculating for each of a plurality of services offered  
10 by each supporting carrier a shipping rate for shipping the particular parcel.  
11

12          41.     The computer program product of Claim 40, said computer program product  
13 further comprising:

14          a set of program instructions for calculating the shipping rate for the particular parcel  
15 for each service offered by each supporting carrier according to a set of parcel shipping  
16 pricing rules for each particular service offered by the particular supporting carrier as applied  
17 to the set of parcel specifications and to the determined billable weight for the particular  
18 parcel and as applied to an origin zip code and an exemplary destination zip code input by the  
19 particular user.  
20

21          42.     The computer program product of Claim 41, said computer program product  
22 further comprising:

23          a set of program instructions for generating an online comparison display of the  
24 calculated shipping rates to a display monitor configured with the client computer device of  
25 the particular user.  
26

27          43.     A shipping management computer system, said shipping management  
28 computer system programmed to:

29          apply, in response to a request by any particular user of a plurality of users, ratable

1 weight determination rules for each of a plurality of carriers to a set of parcel specifications  
2 for a particular parcel input by the particular requesting user, wherein each user accesses the  
3 computer system over a global communications network using a client computer device, each  
4 user client computer device having an individual electronic connection to the global  
5 communications network.

6  
7 44. The shipping management computer system of Claim 43, said shipping  
8 management computer system further programmed to:

9 identify, in response to a request by any particular user of a plurality of users, each  
10 carrier from a plurality of carriers that supports shipping a particular parcel wherein the  
11 particular parcel is characterized by a set of parcel characteristics, wherein said set of parcel  
12 characteristics translate into a particular ratable weight according to dimensional weight  
13 calculation rules for each of the plurality of carriers, wherein each user accesses the computer  
14 system over a global communications network using a client computer device, each user  
15 client computer device having an individual electronic connection to the global  
16 communications network.

17  
18 45. The shipping management computer system of Claim 44, said shipping  
19 management computer system further programmed to:

20 determine, in response to a request by any particular user of a plurality of users, a  
21 ratable weight for a particular parcel for each carrier from a plurality of carriers according to  
22 ratable weight determination rules for each of the plurality of carriers, wherein the particular  
23 parcel is characterized by a set of parcel characteristics input by the particular requesting  
24 user, wherein each user accesses the computer system over a global communications network  
25 using a client computer device, each user client computer device having an individual  
26 electronic connection to the global communications network.

27  
28 46. The shipping management computer system of Claim 43 wherein the ratable  
29 weight is a dimensional weight.

1           47.     The shipping management computer system of Claim 43 wherein the ratable  
2 weight is a billable weight.

3  
4           48.     A method using a computer system for managing shipping of a plurality of  
5 parcels shipped by any one of a plurality of carriers, the method comprising:  
6           applying, in response to a request by any particular user of a plurality of users, ratable  
7 weight determination rules for each of a plurality of carriers to a set of parcel specifications  
8 for a particular parcel input by the particular requesting user, wherein each user accesses the  
9 computer system over a global communications network using a client computer device, each  
10 user client computer device having an individual electronic connection to the global  
11 communications network.

12  
13           49.     The method of Claim 48, said method further comprising:  
14           identifying, in response to a request by any particular user of a plurality of users, each  
15 carrier from a plurality of carriers that supports shipping a particular parcel wherein the  
16 particular parcel is characterized by a set of parcel characteristics, wherein said set of parcel  
17 characteristics translate into a particular ratable weight according to dimensional weight  
18 calculation rules for each of the plurality of carriers, wherein each user accesses the computer  
19 system over a global communications network using a client computer device, each user  
20 client computer device having an individual electronic connection to the global  
21 communications network.

22  
23           50.     The method of Claim 49, said method further comprising:  
24           determining, in response to a request by any particular user of a plurality of users, a  
25 ratable weight for a particular parcel for each carrier from a plurality of carriers according to  
26 ratable weight determination rules for each of the plurality of carriers, wherein the particular  
27 parcel is characterized by a set of parcel characteristics input by the particular requesting  
28 user, wherein each user accesses the computer system over a global communications network  
29 using a client computer device, each user client computer device having an individual



1 electronic connection to the global communications network.

2

3 51. The method of Claim 48 wherein the ratable weight is a dimensional weight.

4

5 52. The method of Claim 48 wherein the ratable weight is a billable weight.

6

7 53. A computer program product embodying computer program instructions for  
8 execution by a computer system for managing shipping of a plurality of parcels shipped by  
9 any one of a plurality of carriers, the computer program product comprising:

10 a set of program instructions for applying, in response to a request by any particular  
11 user of a plurality of users, ratable weight determination rules for each of a plurality of  
12 carriers to a set of parcel specifications for a particular parcel input by the particular  
13 requesting user, wherein each user accesses the computer system over a global  
14 communications network using a client computer device, each user client computer device  
15 having an individual electronic connection to the global communications network.

16

17 54. The computer program product of Claim 53, said computer program product  
18 further comprising:

19 a set of program instructions for identifying, in response to a request by any particular  
20 user of a plurality of users, each carrier from a plurality of carriers that supports shipping a  
21 particular parcel wherein the particular parcel is characterized by a set of parcel  
22 characteristics, wherein said set of parcel characteristics translate into a particular ratable  
23 weight according to dimensional weight calculation rules for each of the plurality of carriers,  
24 wherein each user accesses the computer system over a global communications network  
25 using a client computer device, each user client computer device having an individual  
26 electronic connection to the global communications network.

27

28 55. The computer program product of Claim 54, said computer program product  
29 further comprising:

1 a set of program instructions for determining, in response to a request by any  
2 particular user of a plurality of users, a ratable weight for a particular parcel for each carrier  
3 from a plurality of carriers according to ratable weight determination rules for each of the  
4 plurality of carriers, wherein the particular parcel is characterized by a set of parcel  
5 characteristics input by the particular requesting user, wherein each user accesses the  
6 computer system over a global communications network using a client computer device, each  
7 user client computer device having an individual electronic connection to the global  
8 communications network.

9  
10 56. The computer program product of Claim 53 wherein the ratable weight is a  
11 dimensional weight.

12  
13 57. The computer program product of Claim 53 wherein the ratable weight is a  
14 billable weight.

1 APPARATUS, SYSTEMS AND METHODS FOR ONLINE, MULTI-CARRIER, MULTI-  
2 SERVICE PARCEL SHIPPING MANAGEMENT DETERMINATION OF RATABLE  
3 WEIGHT FOR MULTIPLE CARRIERS  
4

5 ABSTRACT OF THE INVENTION.  
6

7 The present invention provides apparatus, systems and methods that apply, in  
8 response to a request by any particular user of a plurality of users, each Carrier's rules for  
9 determining a ratable weight, including calculating a "dimensional weight" according to  
10 physical dimensions and weight of a particular parcel, and determining a "billable weight"  
11 according to physical dimensions, dimensional weight and actual weight of a particular  
12 parcel. The present invention provides apparatus, systems and methods that determine, in  
13 response to a request by any particular user of a plurality of users, whether each of the  
14 plurality of Carriers supports shipping the particular package. For each of the Carriers that  
15 support shipping the particular parcel, the present invention applies the Carrier's parcel  
16 shipment pricing rules to the ratable weight of the particular parcel and to other factors  
17 regarding the Shipper's shipping requirements in order to determine a price that each Carrier  
18 would charge for shipping the particular parcel.  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29

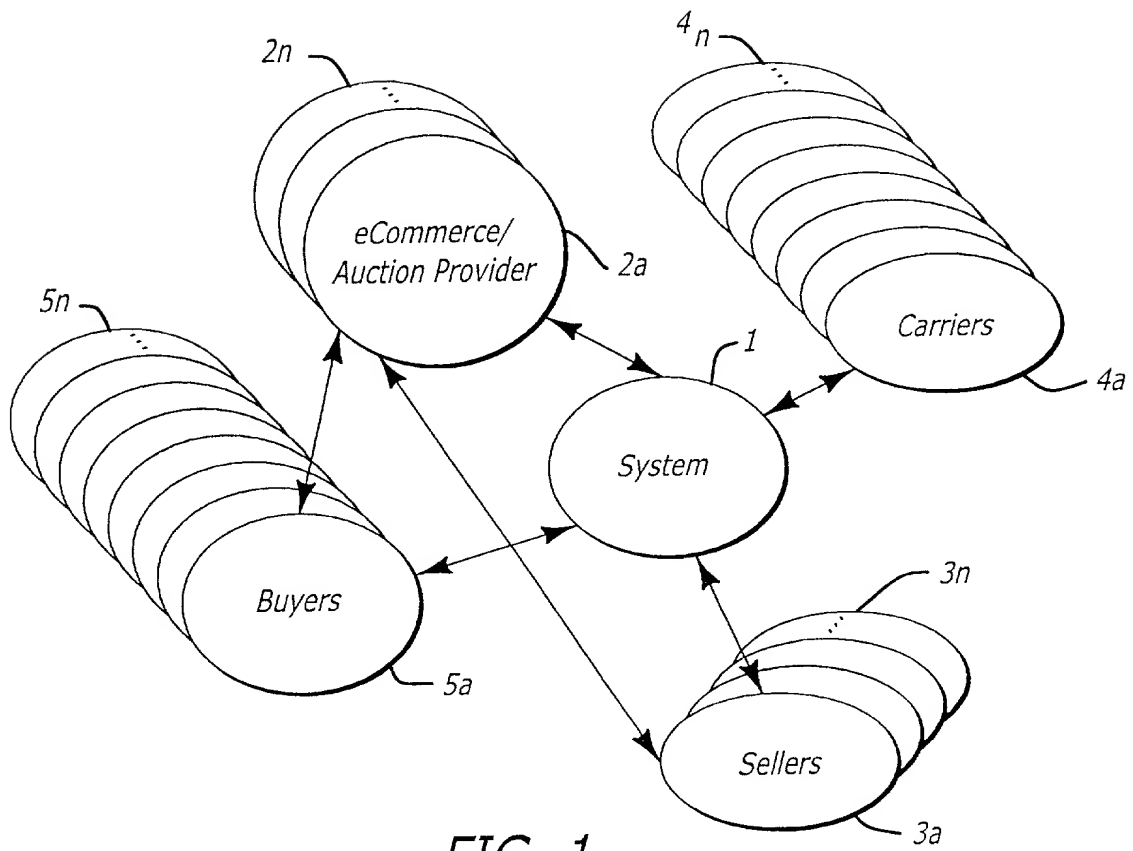


FIG. 1

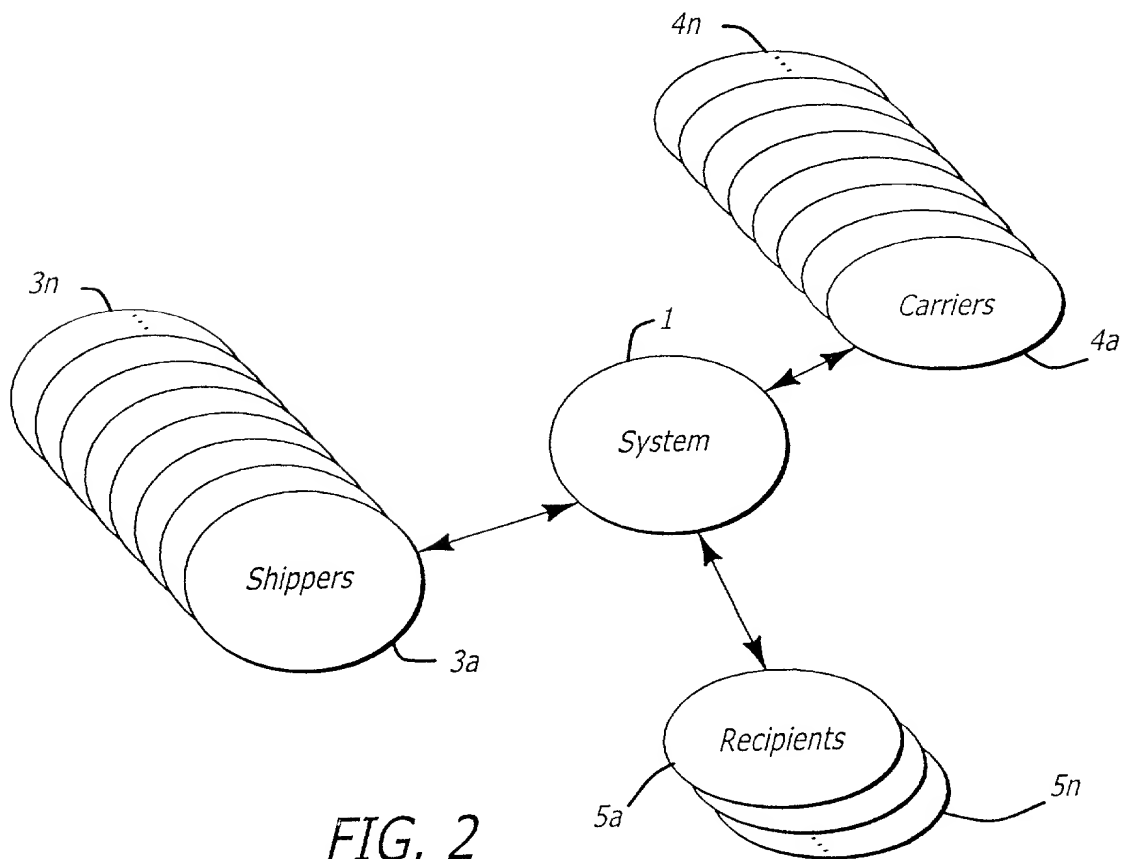
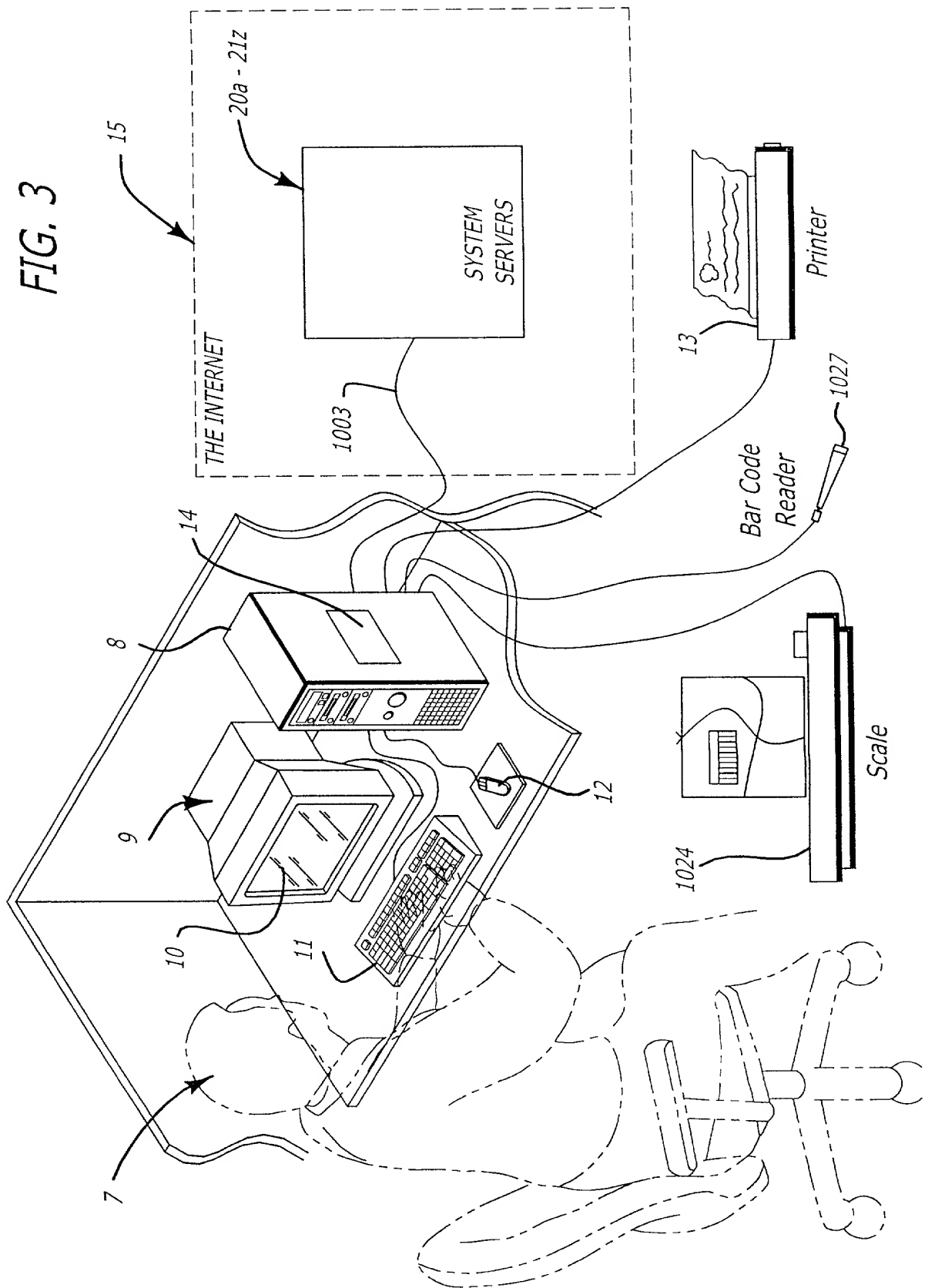


FIG. 2





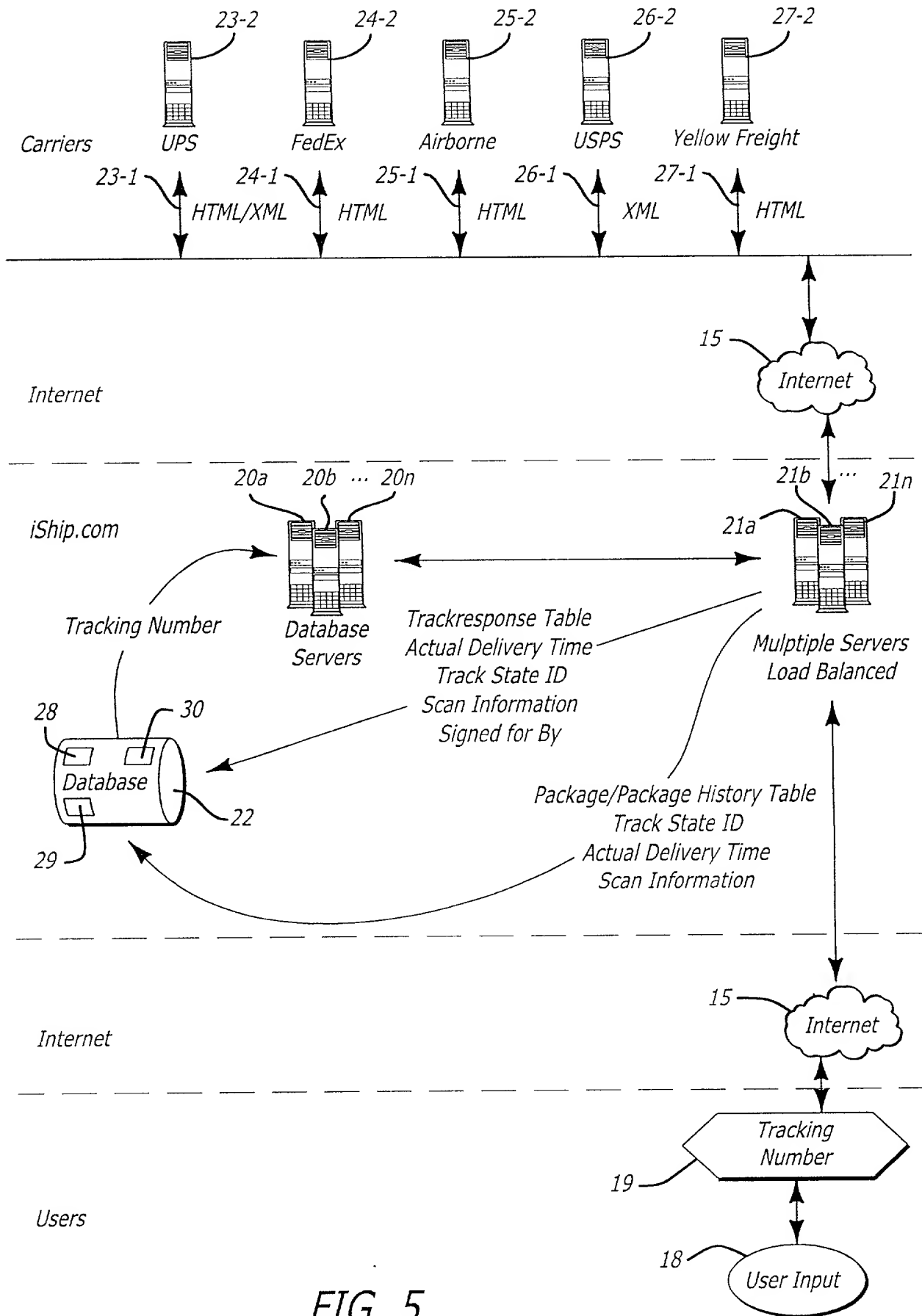


FIG. 5

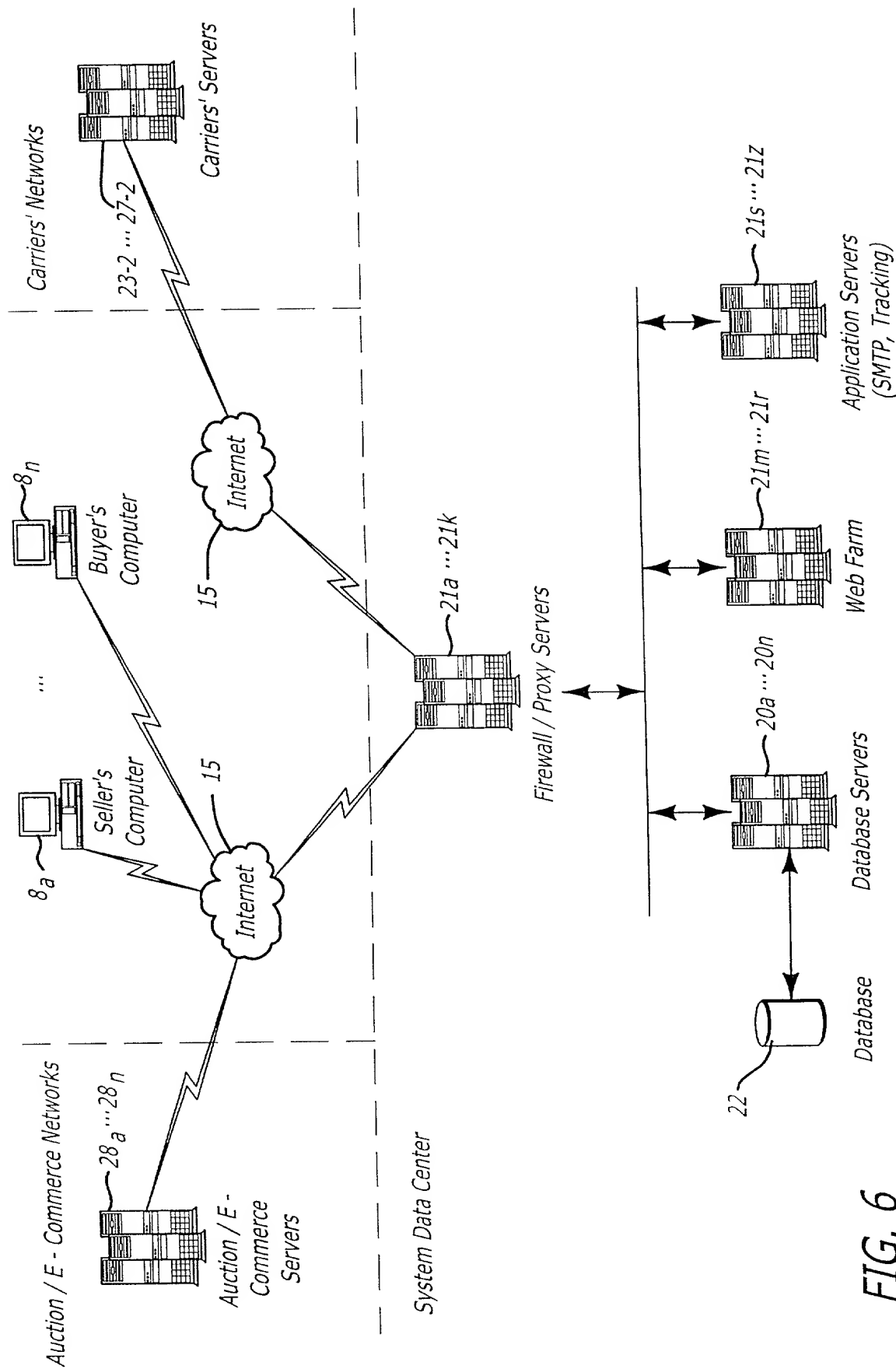


FIG. 6



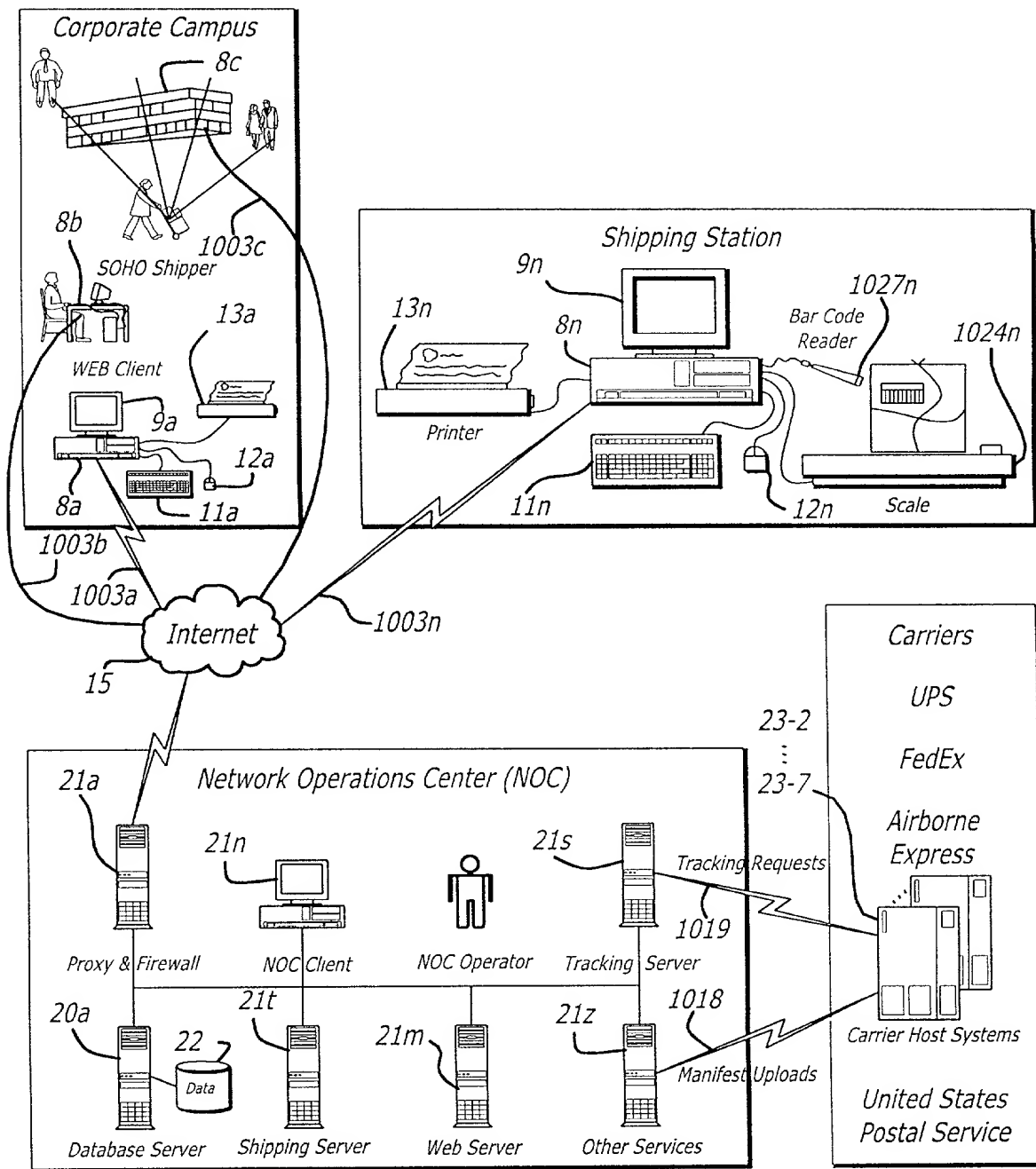


FIG. 7

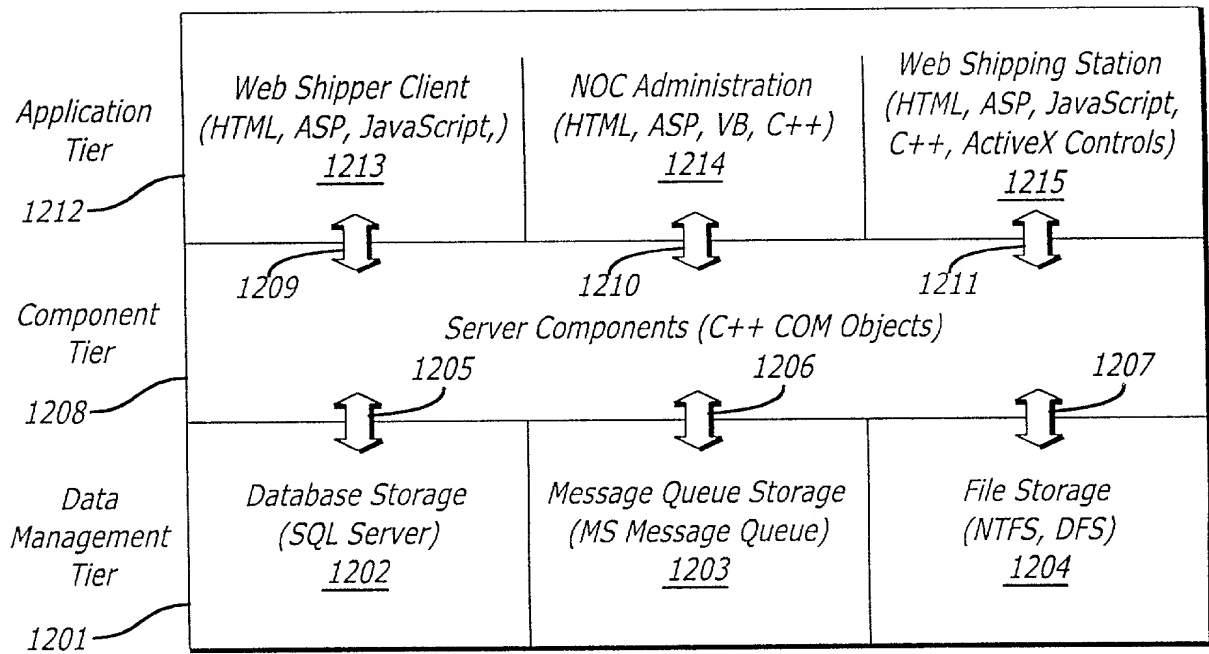


FIG. 8

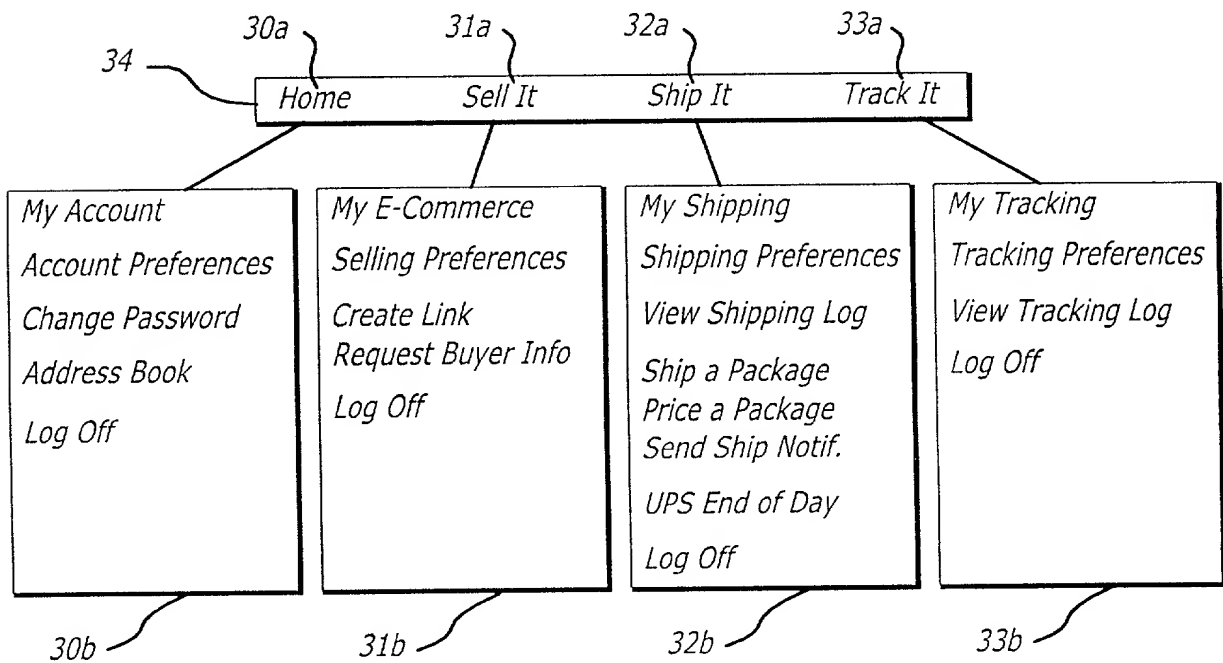
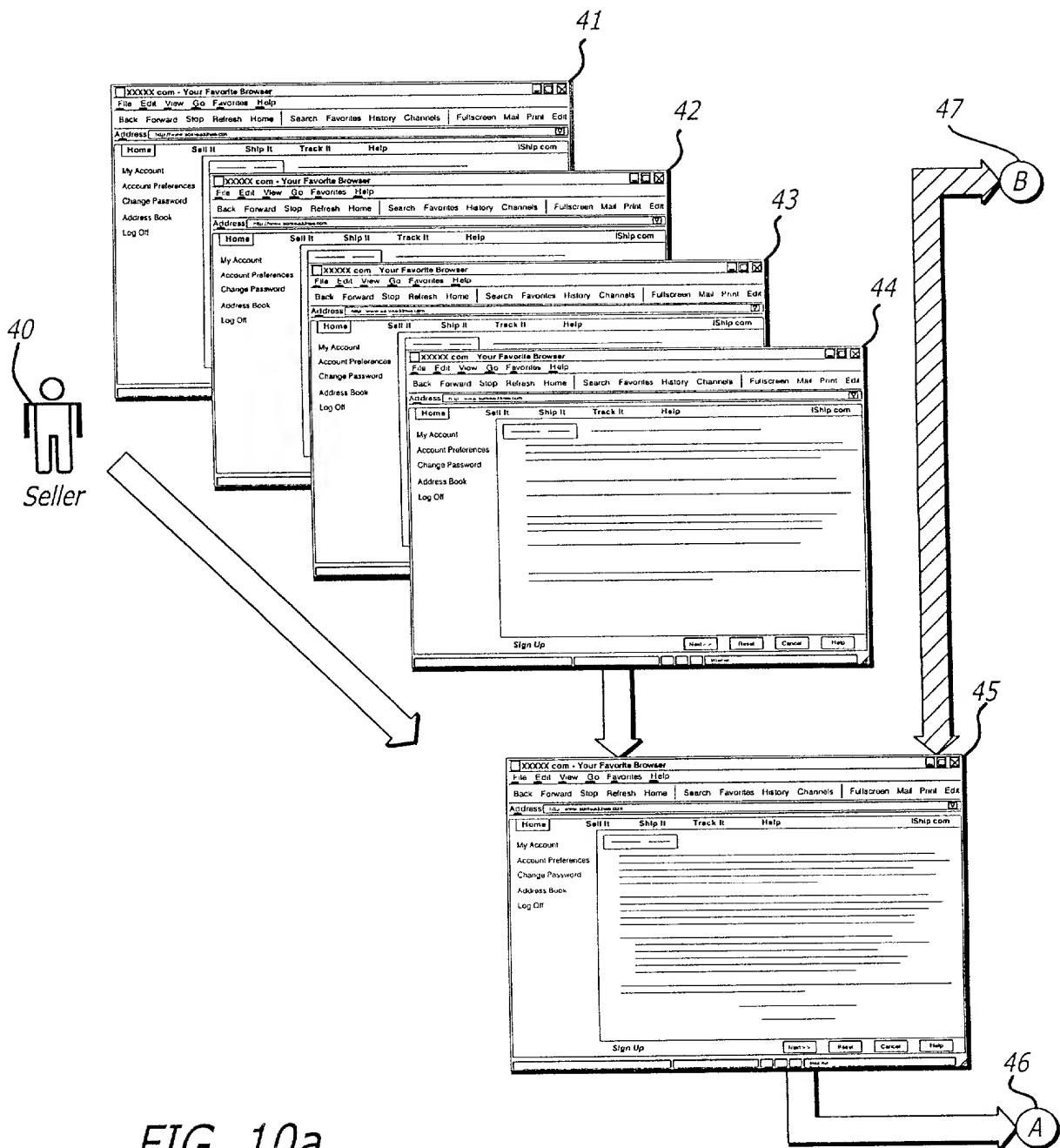


FIG. 9

009007/205860











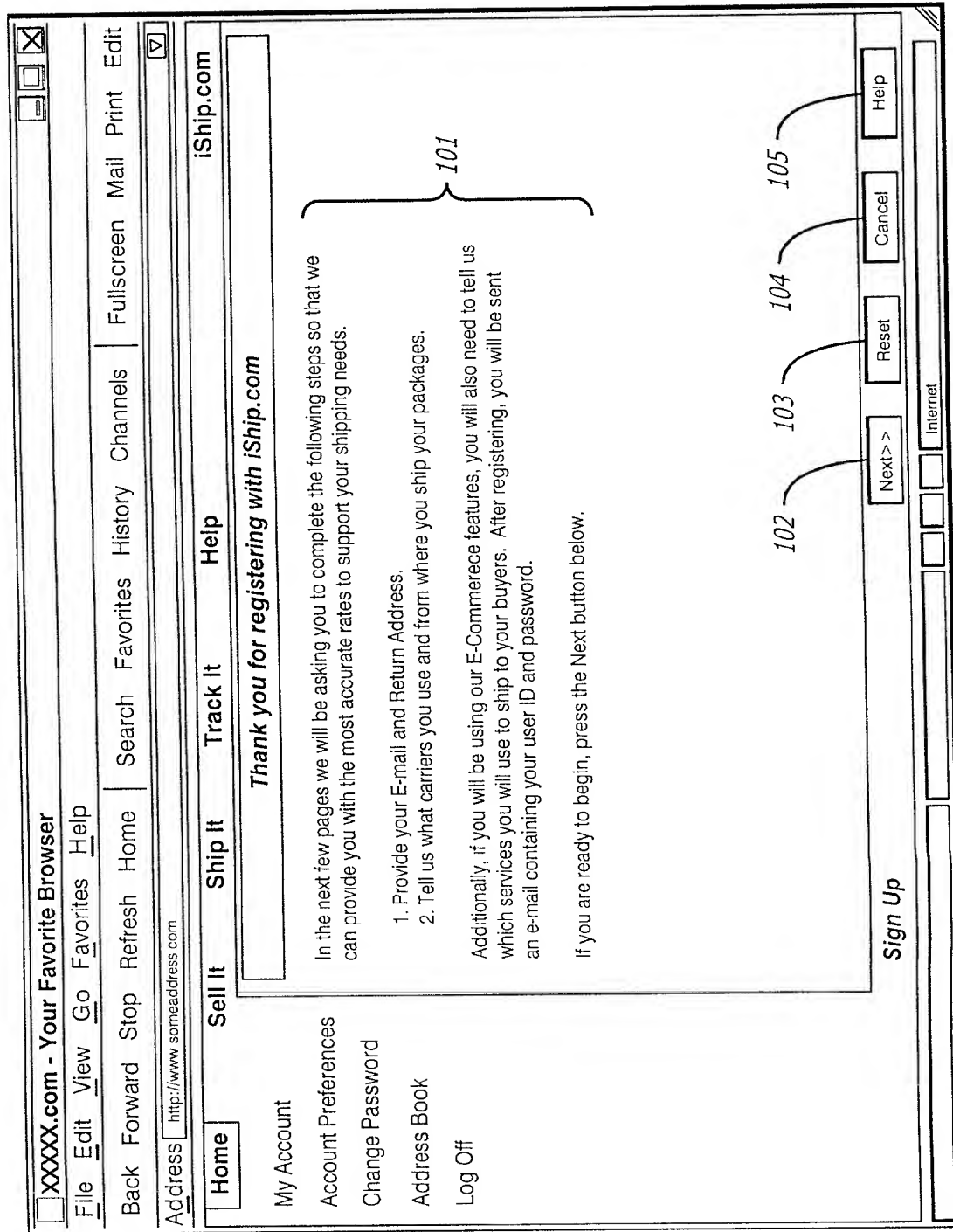


FIG. 11



XXXXX.com - Your Favorite Browser

File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print Edit

Address http://www.someaddress.com

Home Sell It Ship It Track It Help

My Account

Account Preferences

Change Password

Address Book

Log Off

Address

Required fields are in Bold Blue.

Enter your full name the way you would like it to appear on your package shipping label. iShip.com will send shipping and tracking messages to the e-mail address you provide.

Your Name: John Shipper

E-mail: jshipper@anyisp.com

Enter your return address. This should not be a P.O. Box unless you intend to only ship with the USPS. Packages shipped with other carriers cannot be returned to P.O. Boxes.

Company: Any Company

Street: 1234 N Main Street

Floor/Room: Suite 567

Department: Operations

City: Yourtown

State: AL - Alabama

Zip Code: 20002-1001

Telephone: (524) 555-4321

Fax: (524) 555-1234

<< Back

Next >>

Reset

Cancel

Help

Sign Up

Internet

FIG. 12





XXXXX.com - Your Favorite Browser

File Edit View Go Favorites Help

Back Forward Stop Refresh Home

Search Favorites History Channels Fullscreen Mail Print Edit

Address <http://www.someaddress.com>

Home Sell It Ship It Track It Help

UPS Shipping

Tell us if you want to ship your UPS packages using iShip.com

My Account

Account Preferences

Change Password

Address Book

Log Off

140

I will use iShip.com to ship my UPS packages and I have my own UPS Account.

UPS Account Number.

Scheduled Pickup time:  AM  PM

143

I will use iShip.com to ship my UPS packages but do not have a UPS Account. I will drop the packages off at my local retail shipping center. Please set my default Shipping Location to my retail shipping center.

144

I will not use iShip.com to ship my UPS packages.

145

If you have chosen to ship your UPS packages with iShip.com using your own UPS account, you will be notified by e-mail when UPS has activated your account for Internet based shipping. This typically takes two business days.

Sign Up

<<Back

Next>>

Reset

Cancel

Help

FIG. 16

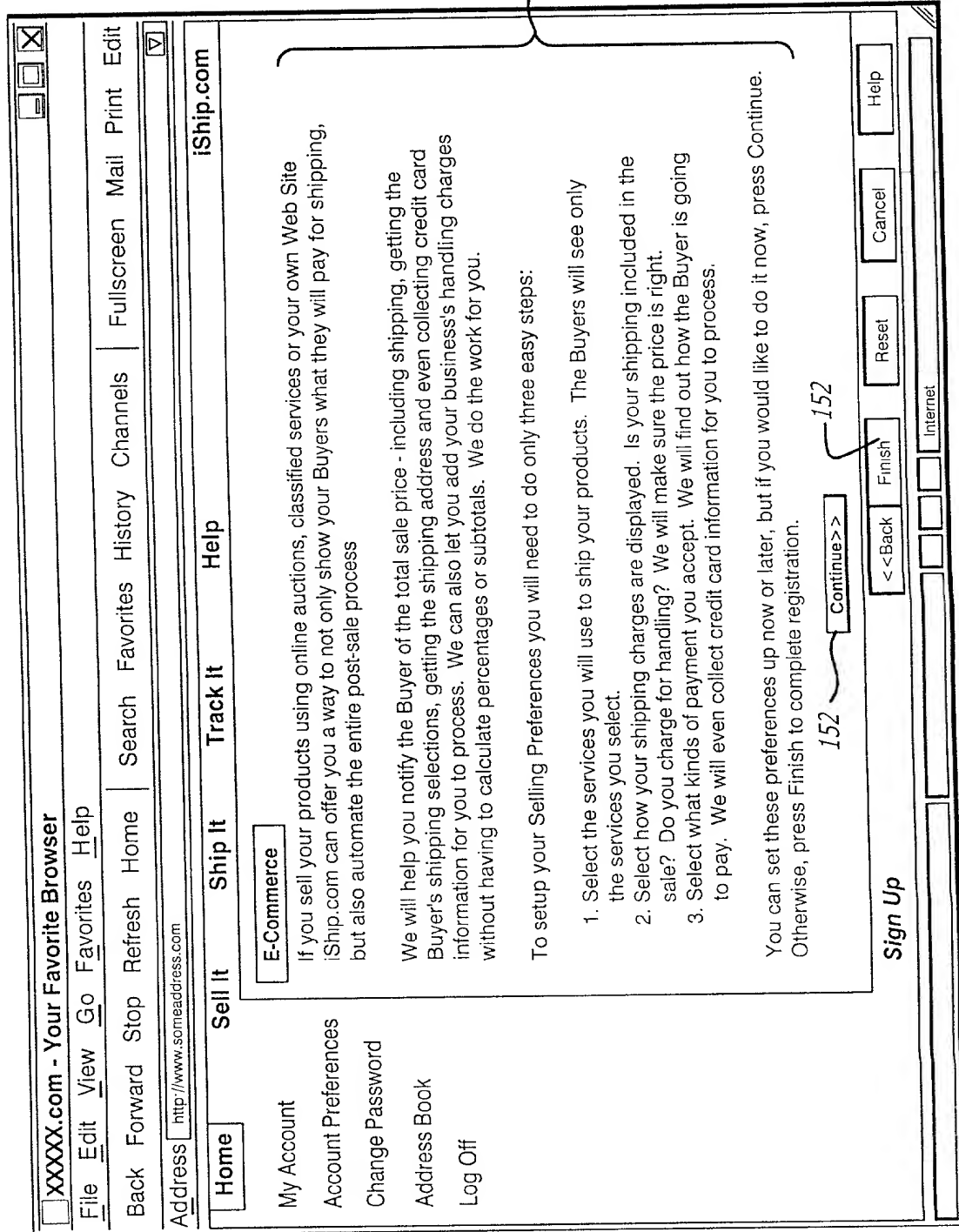


FIG. 17



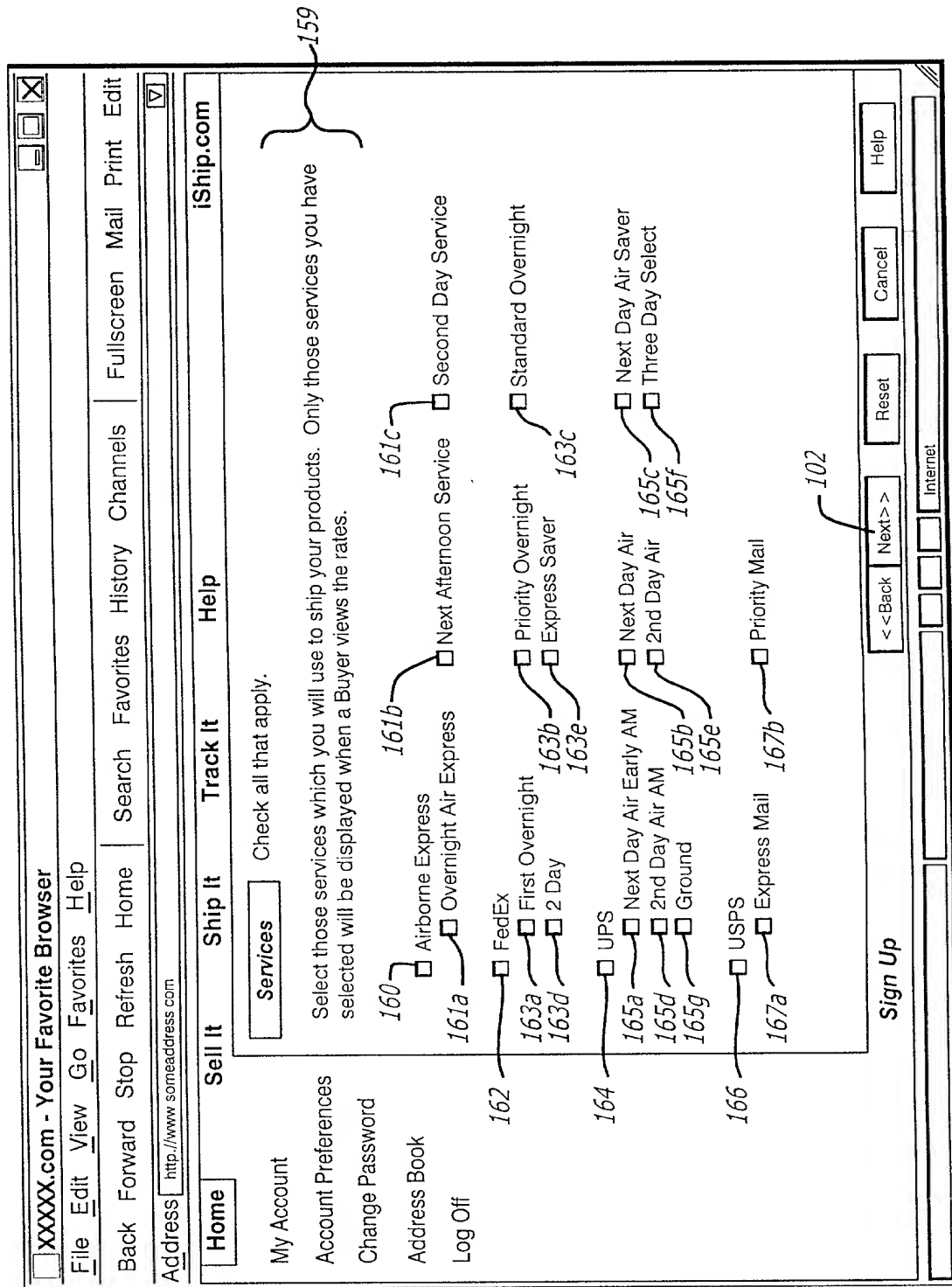


FIG. 19

XXXXX.com - Your Favorite Browser

File Edit View Go Favorites Help

Back Forward Stop Refresh Home

Search Favorites History Channels

Fullscreen Mail Print Edit

Address

My iShip

Price It

Ship It

Track It

Account Info

Help

My Pricing

Price a Package

Address Book

My Selling

Create Links

Request Buyer Info

Price Preferences

Log Off

Services

Check all that apply.

Select those services which you will use to ship your products. Only those you have selected will be displayed when a Buyer views the rates.

☒ Airborne Express

☒ Overnight Air Express

☒ Next Afternoon Service

☒ Second Day Service

☒ FedEx

☒ First Overnight

☒ 2 Day

☒ Priority Overnight

☒ Express Saver

☒ Standard Overnight

☒ UPS

☒ Next Day Air Early AM

☒ 2nd Day Air AM

☒ Ground

☒ Next Day Air

☒ 2nd Day Air

☒ Next Day Air Saver

☒ 3 Day Select

☒ USPS

☒ Express Mail

☒ Priority Mail

☒ Parcel Post

Next >>

Cancel

Help

Internet

FIG. 20



XXXXX.com - Your Favorite Browser

File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print Edit

Address http://www.someaddress.com

Home

Sell It Ship It Track It Help

iShip.com

My Account

Account Preferences

Change Password

Address Book

Log Off

Charges

170 Item cost includes shipping charges. No rates are displayed, only services available.

171 Buyer pays actual shipping charges.

172 Buyer pays shipping and additional charges. Select charges to be added to the shipping Total displayed to the Buyer. Check all that apply.

173 ☐ Add Percentage of Shipping Cost

175 ☐ Add Fixed Handling Charge

177 ☐ Add iShip.com Service Fee

174 %

176 \$

Payment

178 Indicate if you want credit card information to be collected and passed on for your process. Check all that apply.

179a ☐ Visa

179b ☐ American Express

179c ☐ Personal Check

179d ☐ Cashier's check

179e ☐ MasterCard

179f ☐ Discover

179g ☐ Money Order

180 ☐ Collect credit card information so that I can process it myself.

152

Sign Up

< Back Finish Reset Cancel Help

Internet

FIG. 21



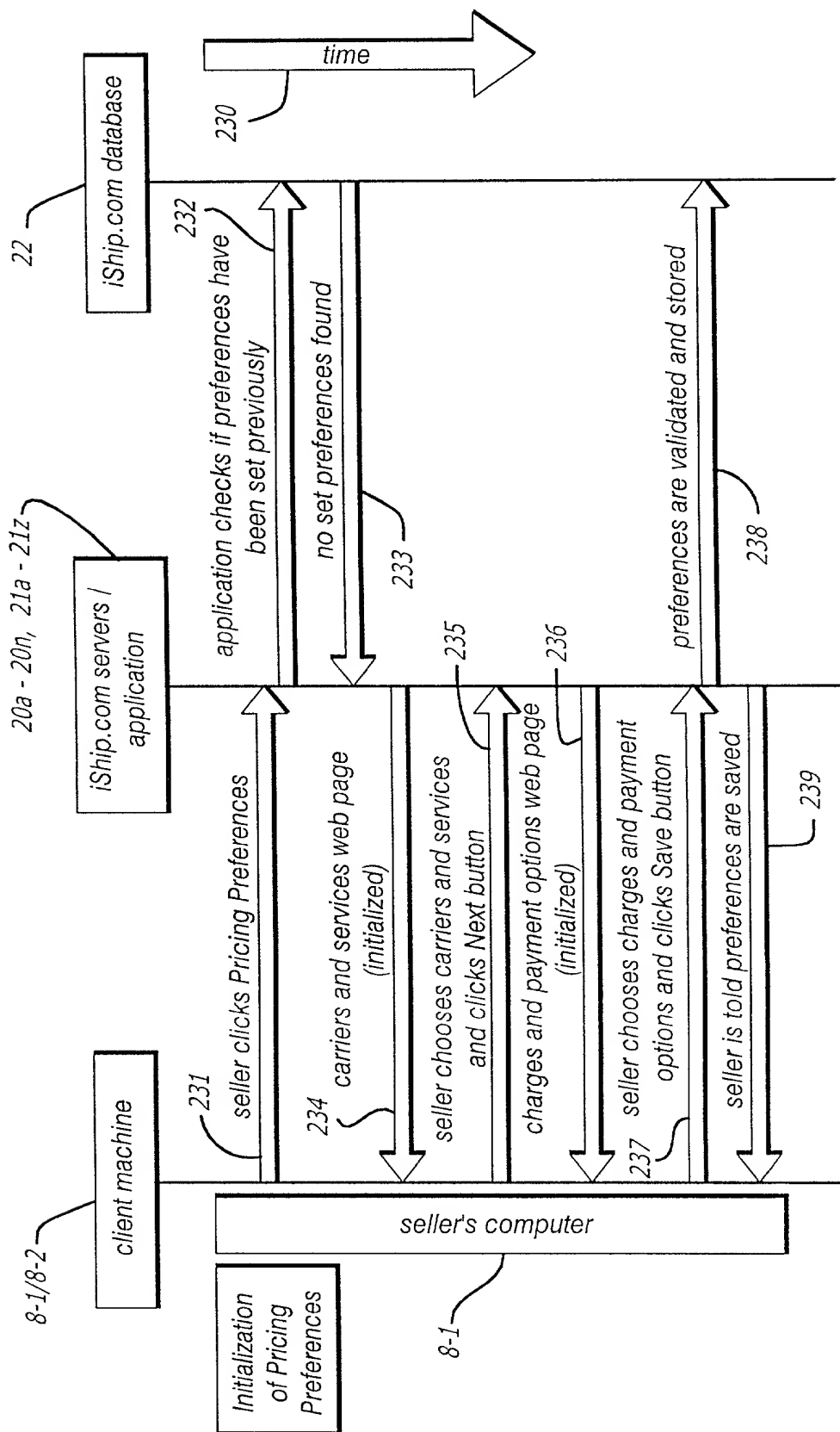
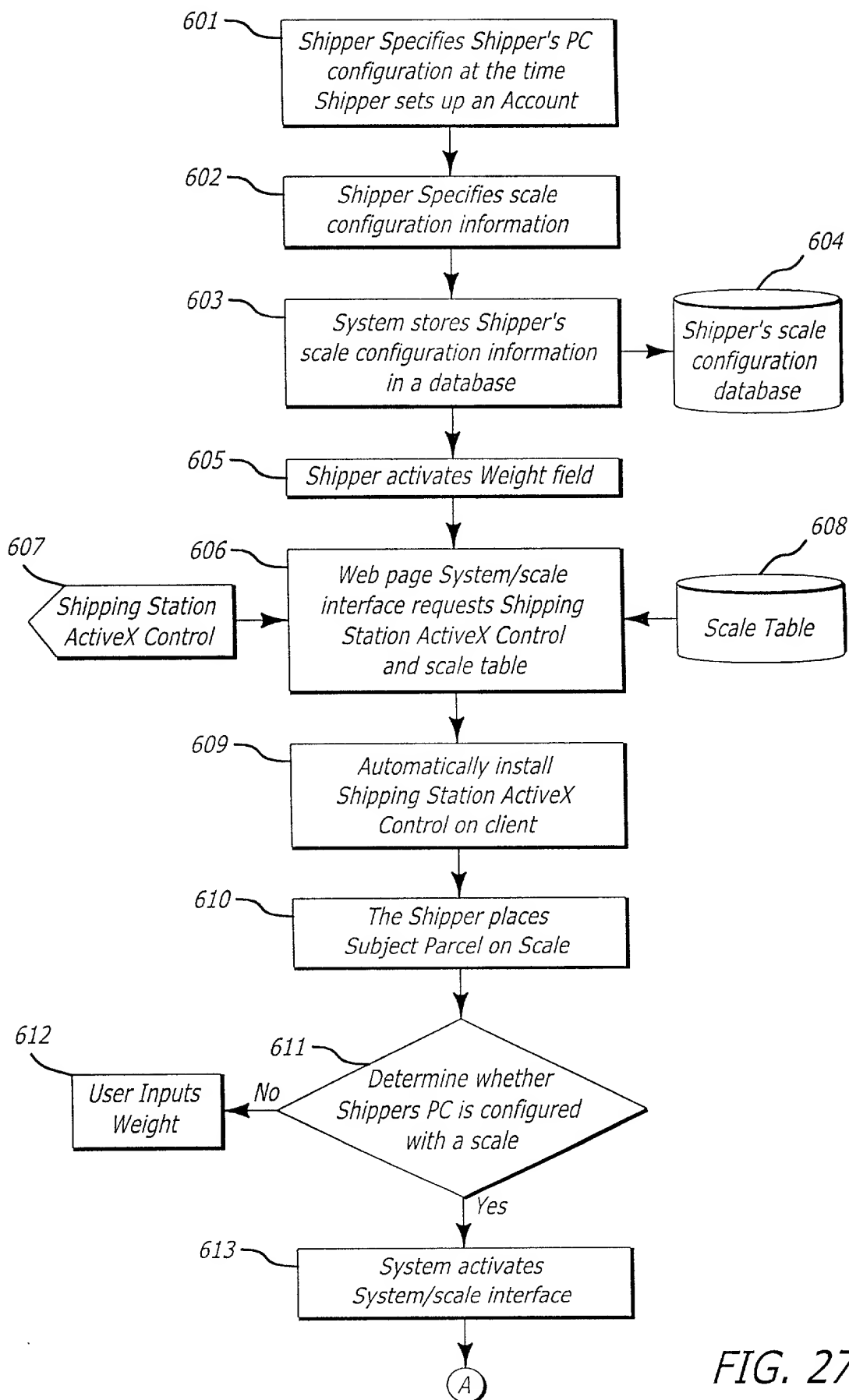


FIG. 23



FIG. 25





```

graph TD
    A((A)) --> 615[615 Call Window's libraries to open serial or parallel port with which scale is configured]
    615 --> 616[616 Send communication query to the particular scale]
    608_1[(608 Scale Table)] --> 616
    616 --> 617[617 Scale returns a data stream containing the weight of the parcel and optionally, other types of information]
    617 --> 618[618 Interpret return data stream according to the scale make and model rules]
    608_2[(608 Scale Table)] --> 618
    618 --> 619[619 As long as Shipper's cursor remains on Weight field, poll scale repeatedly requesting the weight and requesting notification that the weight is stabilized]
    619 --> 620{620 For each scale poll, determine whether there is a difference in the weight as compared with the last time that the System polled the scale}
    620 -- YES --> 621[621 If difference in weight, then fire an event to client web browser to display on the User Interface screen that the weight has changed]
    620 -- NO --> B((B))
  
```

**FIG. 27h**

FIG. 27b



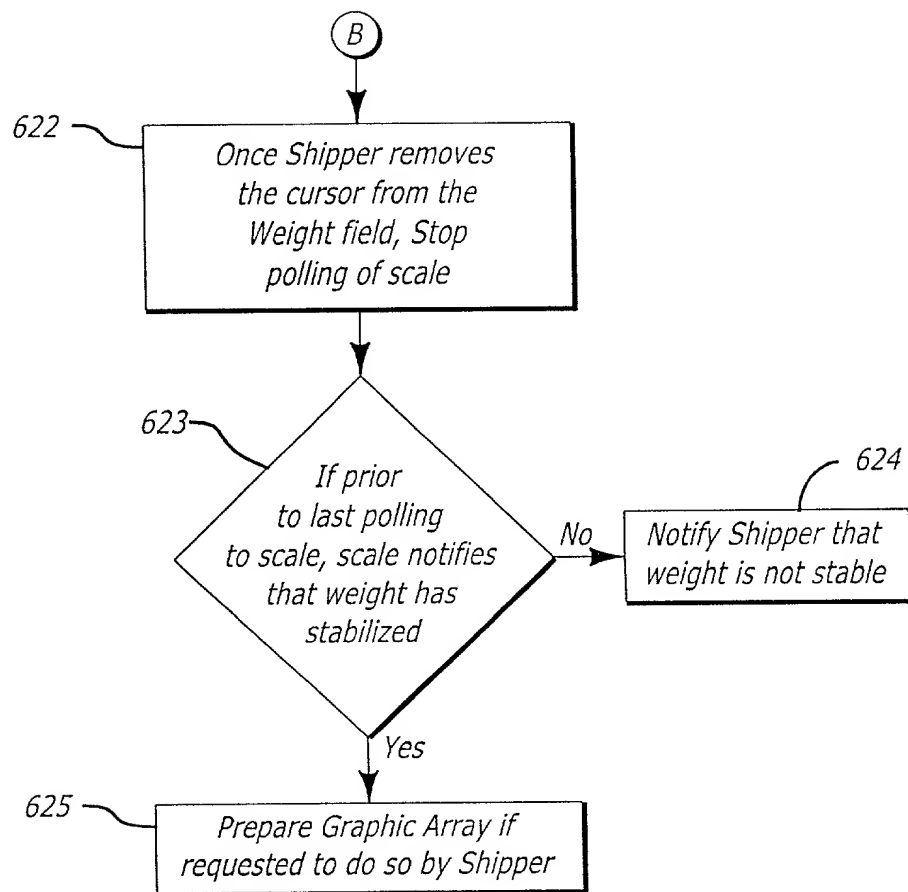


FIG. 27c



XXXXX.com - Your Favorite Browser

File

Edit

View

Go

Favorites

Help

Back

Forward

Stop

Refresh

Home

Search

Favorites

History

Channels

Fullscreen

Mail

Print

Edit

Address

http://www.someaddress.com

My iShip

Price It

Ship It

Track It

Account Info

Help

My Pricing

Price a Package

Address Book

My Selling

Create Links

Request Buyer Info

Price Preferences

Log Off

1. Define Item

Enter the shipping weight and value of the item.

Weight\*: 10 lbs. ▾

☐ Irregular or Non-Standard Packaging

Loss Protection: ☒ Basic Coverage\*\* ☐ Declared Value \$

\*\* (Up to \$100, except Express mail which is up to the first \$500. Priority Mail has no basic coverage.)

2. Preview Item

Select an example destination or enter a Zip Code to preview.

☒ (Select One) ▾

☐ Destination Zip Code

3. Create Link

Press Go to generate a link. Paste the link into your HTML code.

Link Type: ☒ HTML Link ☐ Web Address Only

Link Text:

Click here to use iShip.com to view your shipping charges.

Link Text:

Create Link

FIG. 29

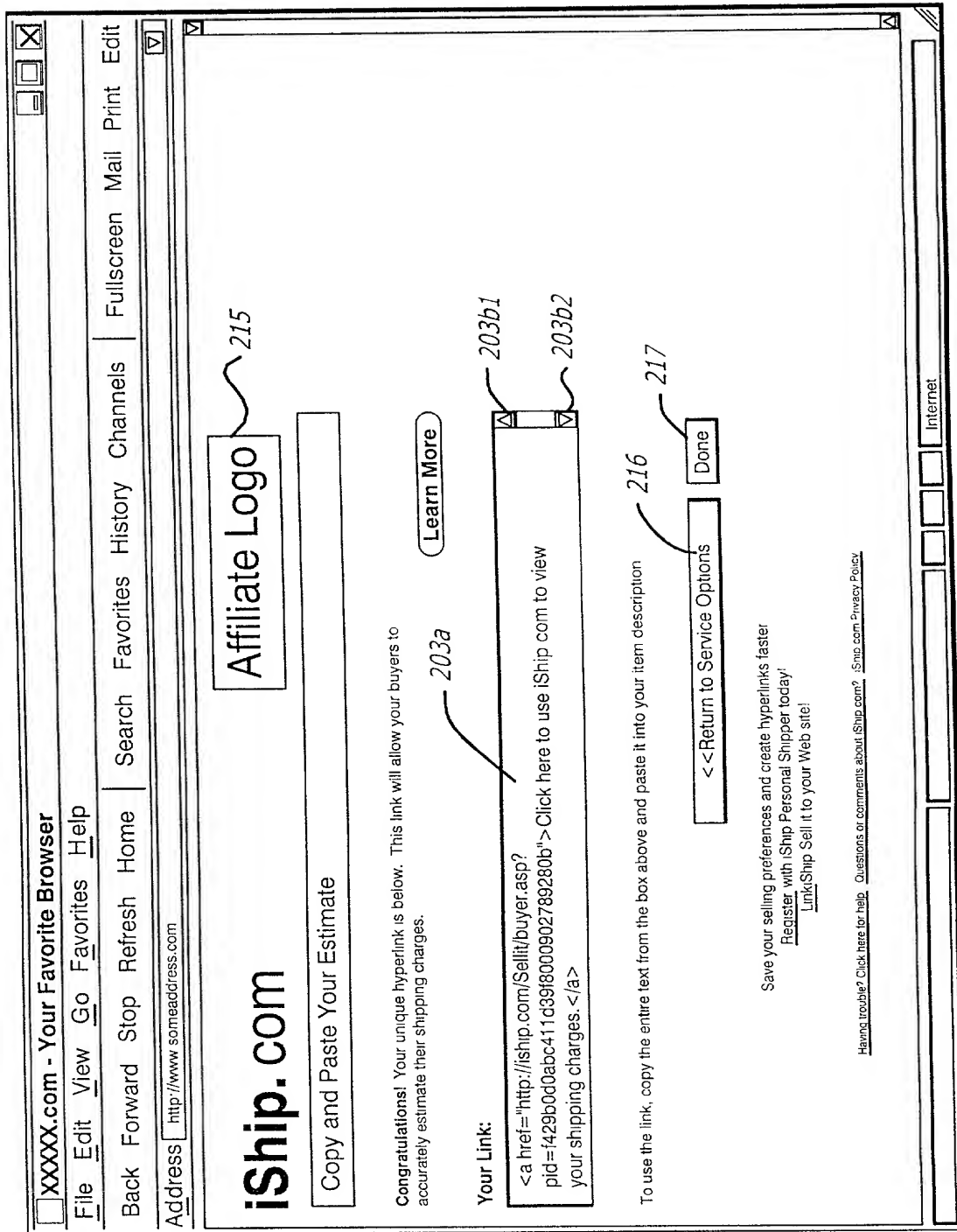
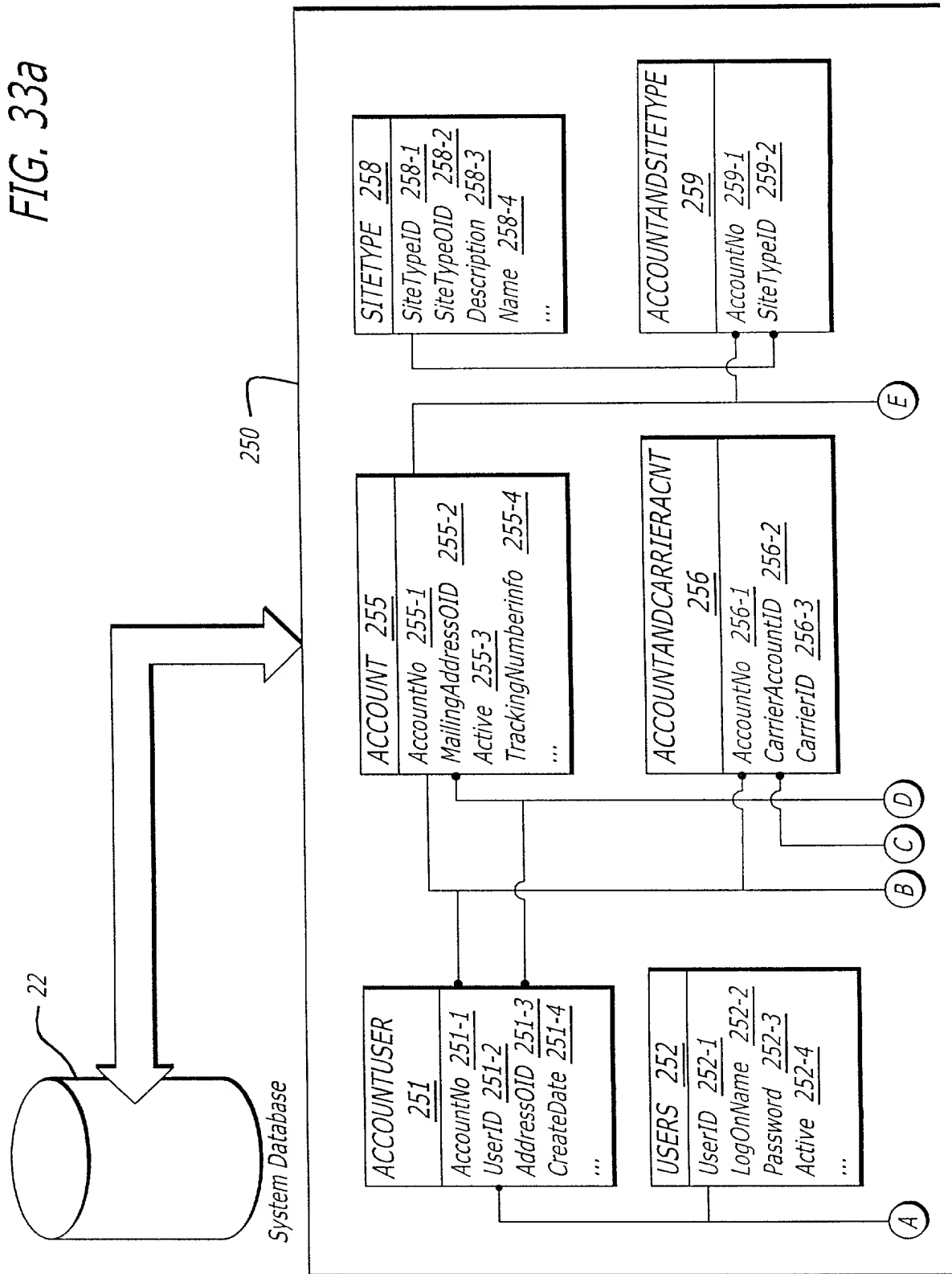
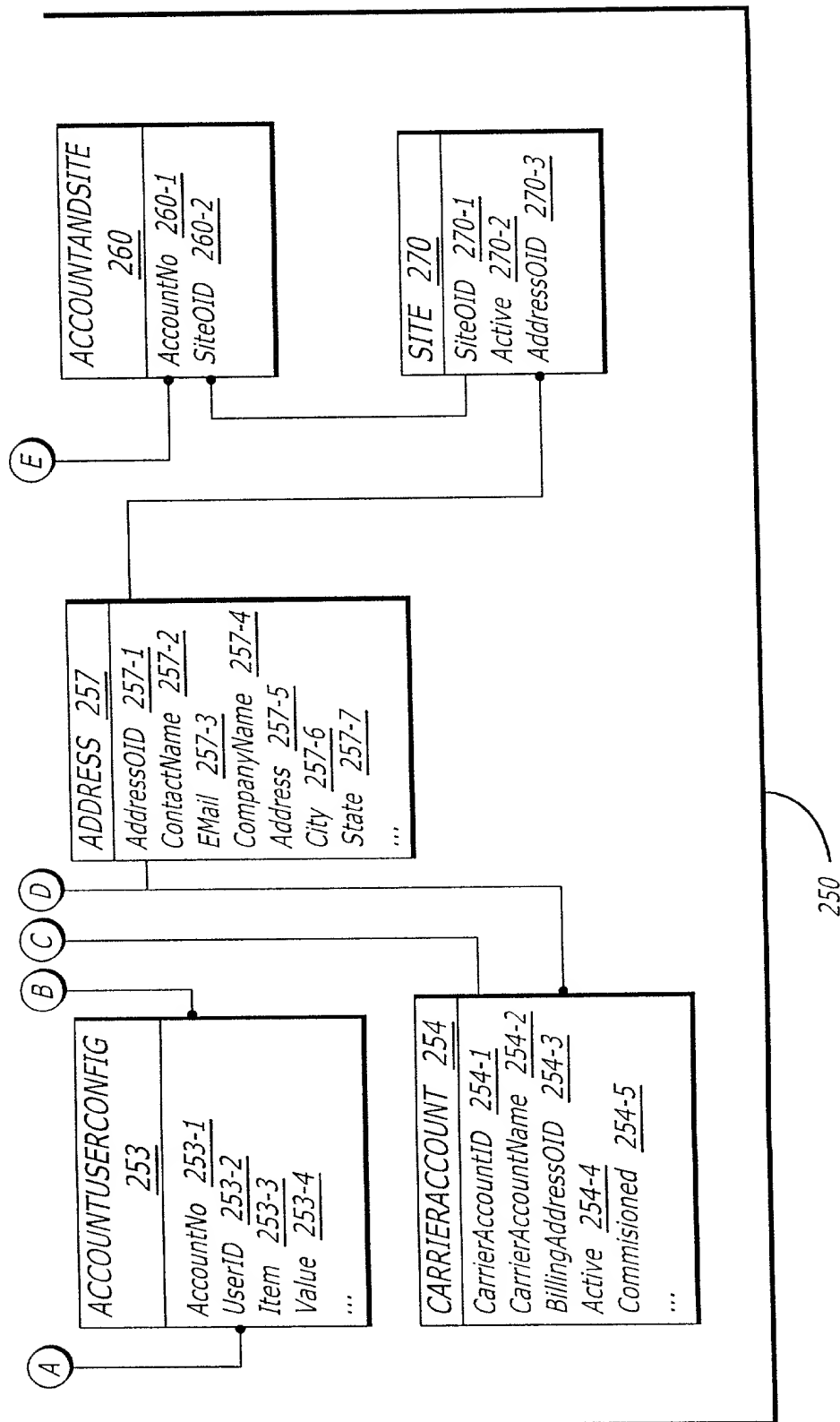


FIG. 30



FIG. 33a





**FIG. 33b**

FIG. 34



iShip.com

The Internet Package Shipper

Enter your Zip Code and other options, then click Get Rates

The Zip Code where the item would be delivered is:

80302

The delivery address for the item would be:

Business

Residence

I want the service to have a guaranteed delivery time:

Yes

No

Click the "Back" on your browser to return to item page.

Get Rates

Help

Shipping services and rates provided by Ship.com, The Internet Package Shipper

FIG. 35



FIG. 36b

```

graph TD
    3020[Join AccountAndCarrierAcnt, CarrierAccount, RateDefinition database tables on the System's AccountNo to retrieve all rate ID's] --> 3021[Join BillingOption, BillingOptionAndService, BillingOptionAndServiceOption, tables on CarrierID, ServiceID, and ServiceOptionID]
    3021 --> 3022
    subgraph 3022 [For each Carrier:]
        3023[Calculate dimensional weight;] --> 3024[Determine billable weight: actual weight, dimensional weight, oversize weight, or letter weight]
        3024 --> 3025[Validate package weight and dimensions against carrier business rules]
        3025 --> 3026{Do package weight and dimensions violate carrier business rules ?}
        3026 -- YES --> 3027[Continue to next Carrier]
        3026 -- NO --> A((A))
    end
    3027 --> 3022

```



FIG. 36d

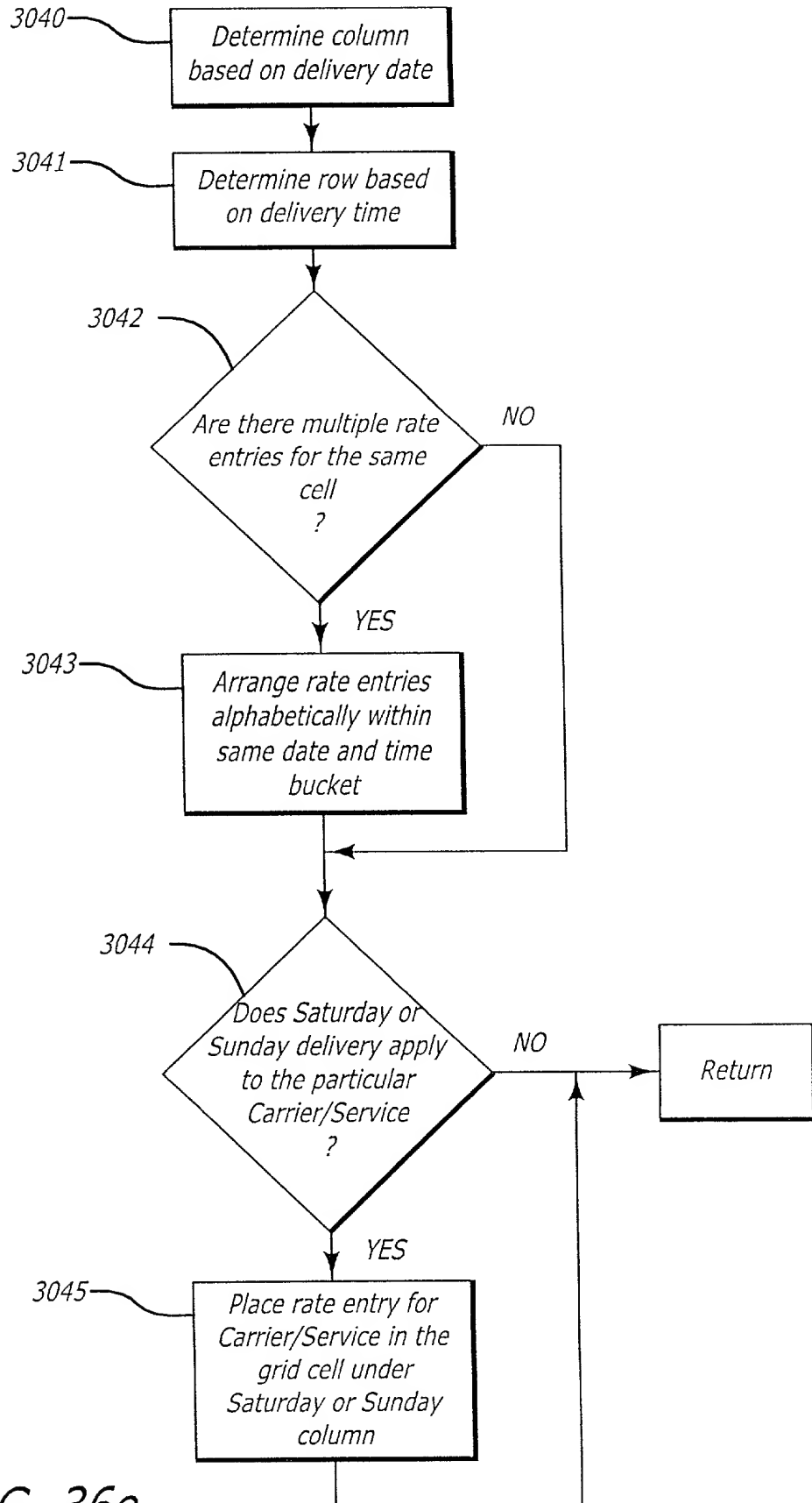


FIG. 36e

[My iShip](#) | [Price It](#) | [Ship It](#) | [Track It](#) | [Sell It](#) | [Help](#)

☐ Sell It

- 1 Shipment Info
- 2 Package Info
- 3 Shipping Options
- 4 Preview Rates**
- 5 Create Link

Saved Package  
Log Off

---

### Rates and Delivery Times:

Choose Best Price or Faster Delivery to highlight the rate you prefer.  
To filter your results, choose options below and click the Update button.  
For more information about the Rate Grid, click More.

④ Ship Optimizer:		Best Price	Fastest Delivery	Next Day	2nd Day	3rd Day
▶ Airborne Express	Second Day				\$13.48	
▶ FedEx	Second Day					\$18.99
▼ UPS						
Next Day Air Early AM		8:30am		\$62.65		
Next Day Air		10:30am		\$35.14		
Next Day Air Saver		3:00pm		\$31.02		
2nd Day Air		12:00pm			\$18.92	
2nd Day Select		End of Day			\$16.99	
3 Day Select		End of Day				\$12.43
Ground		End of Day				① \$8.57
▶ USPS		Parcel Post				\$11.17

Shipping Charges: \$8.57      5301

Shipment Info:  
No. of Packages: 1  
Destination: Prosser, WA 99350  
United States

Package Info:  
Weight: 3.2 lb.  
Packaging Type: My Own  
Dimensions: 10"x8"x5"

Loss Protection: Yes, \$150  
COD:

[Having Trouble?](#)  
[Questions or Comments](#)

FIG. 36f

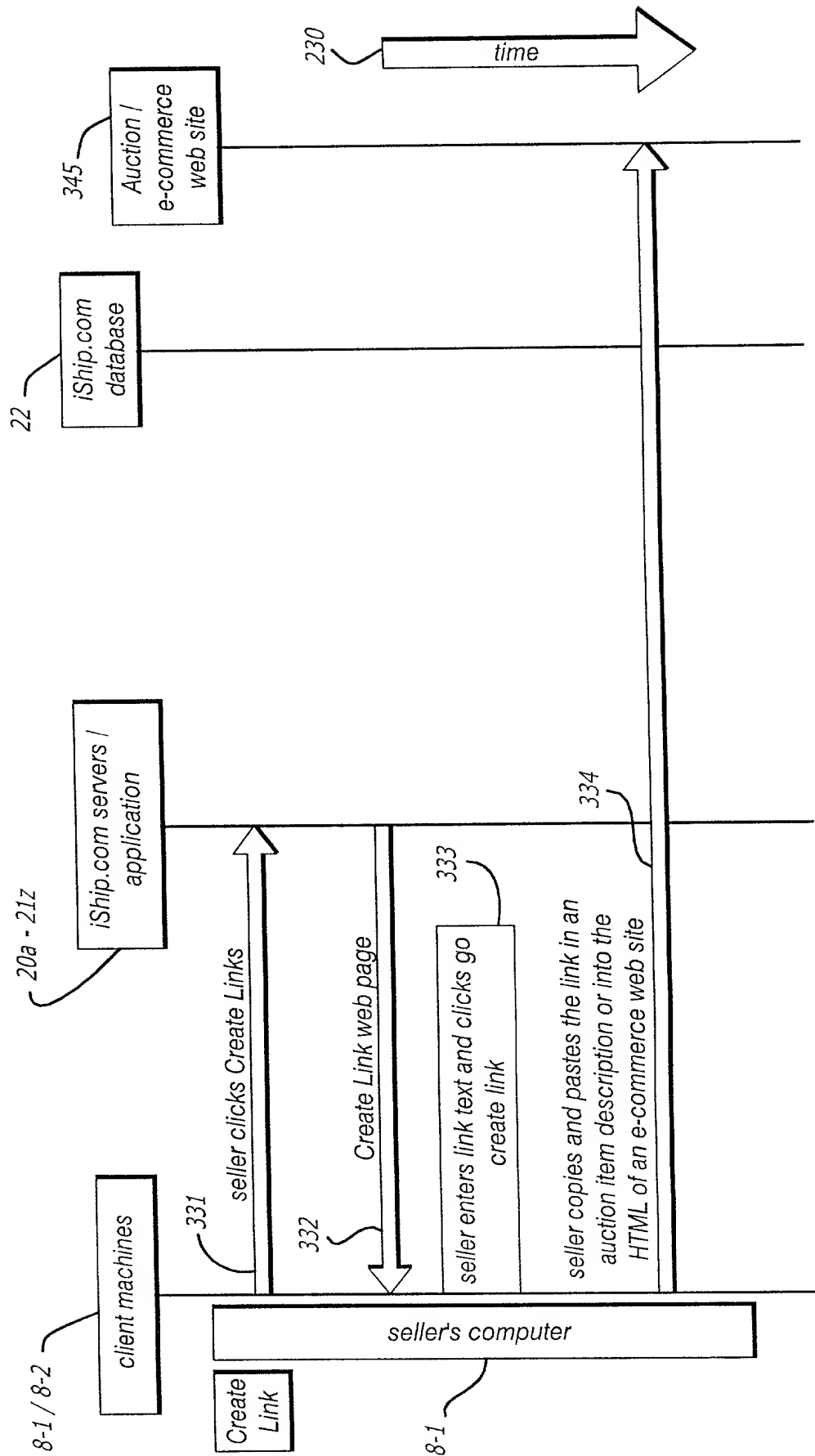


FIG. 37a



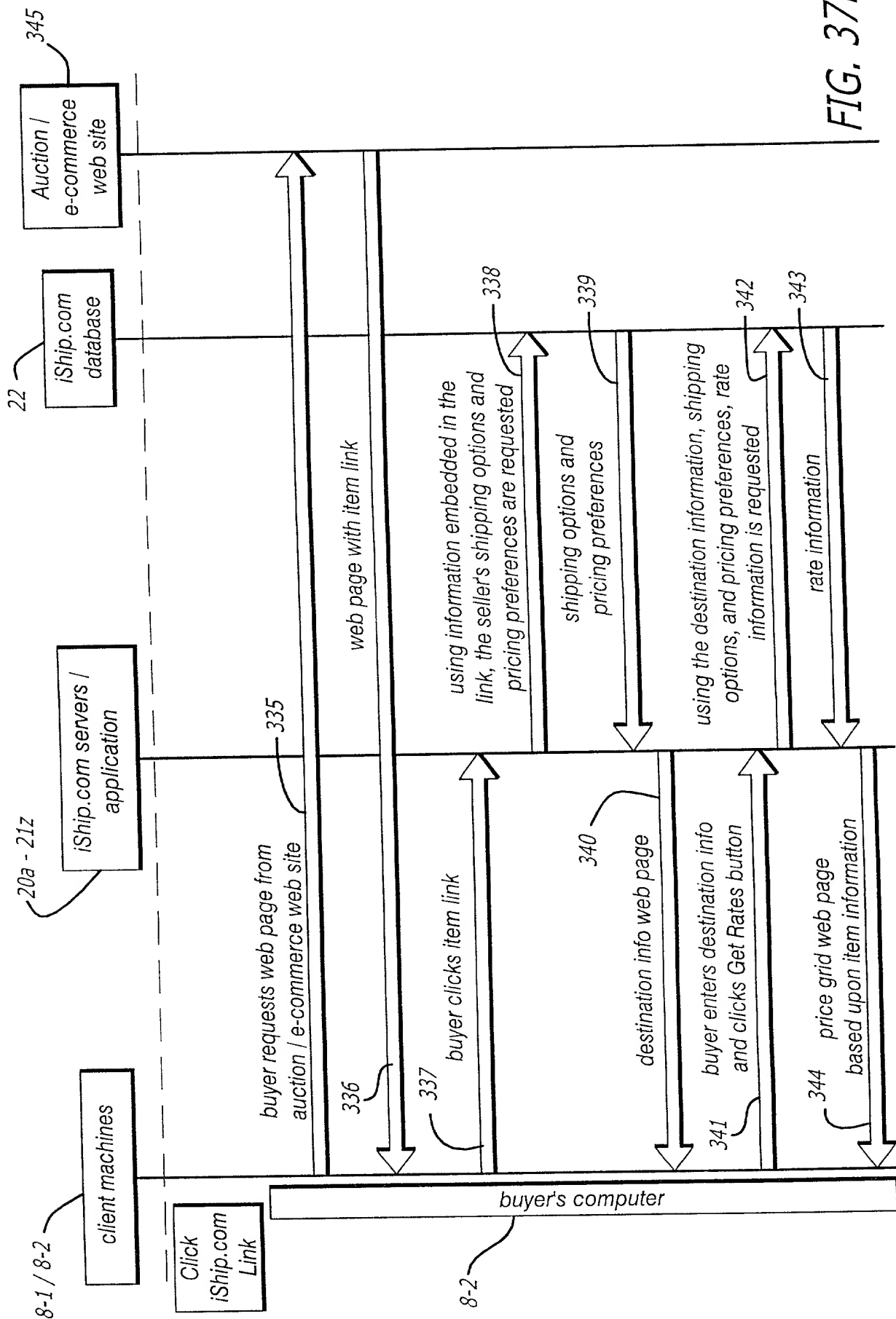


FIG. 37b

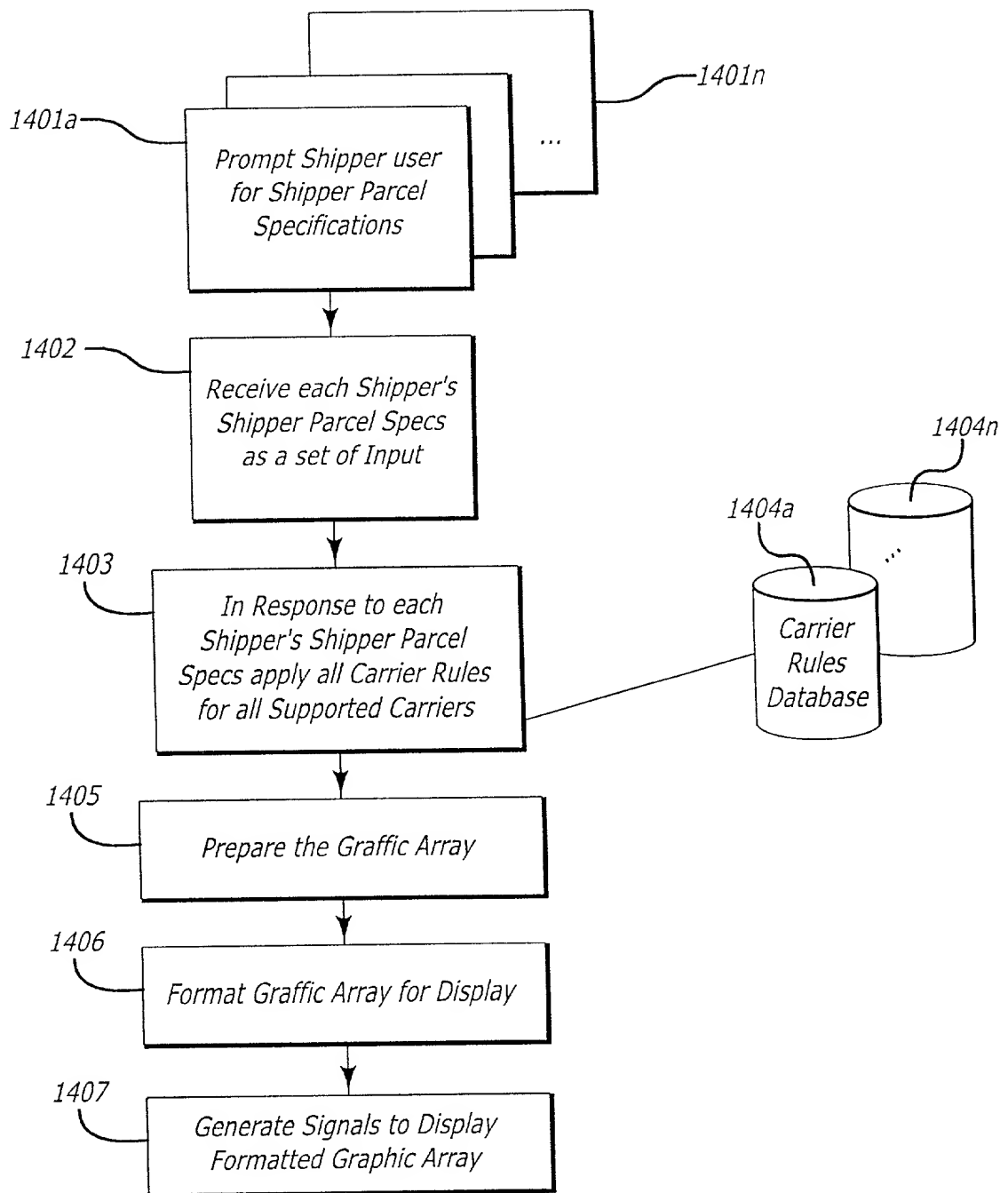


FIG. 38

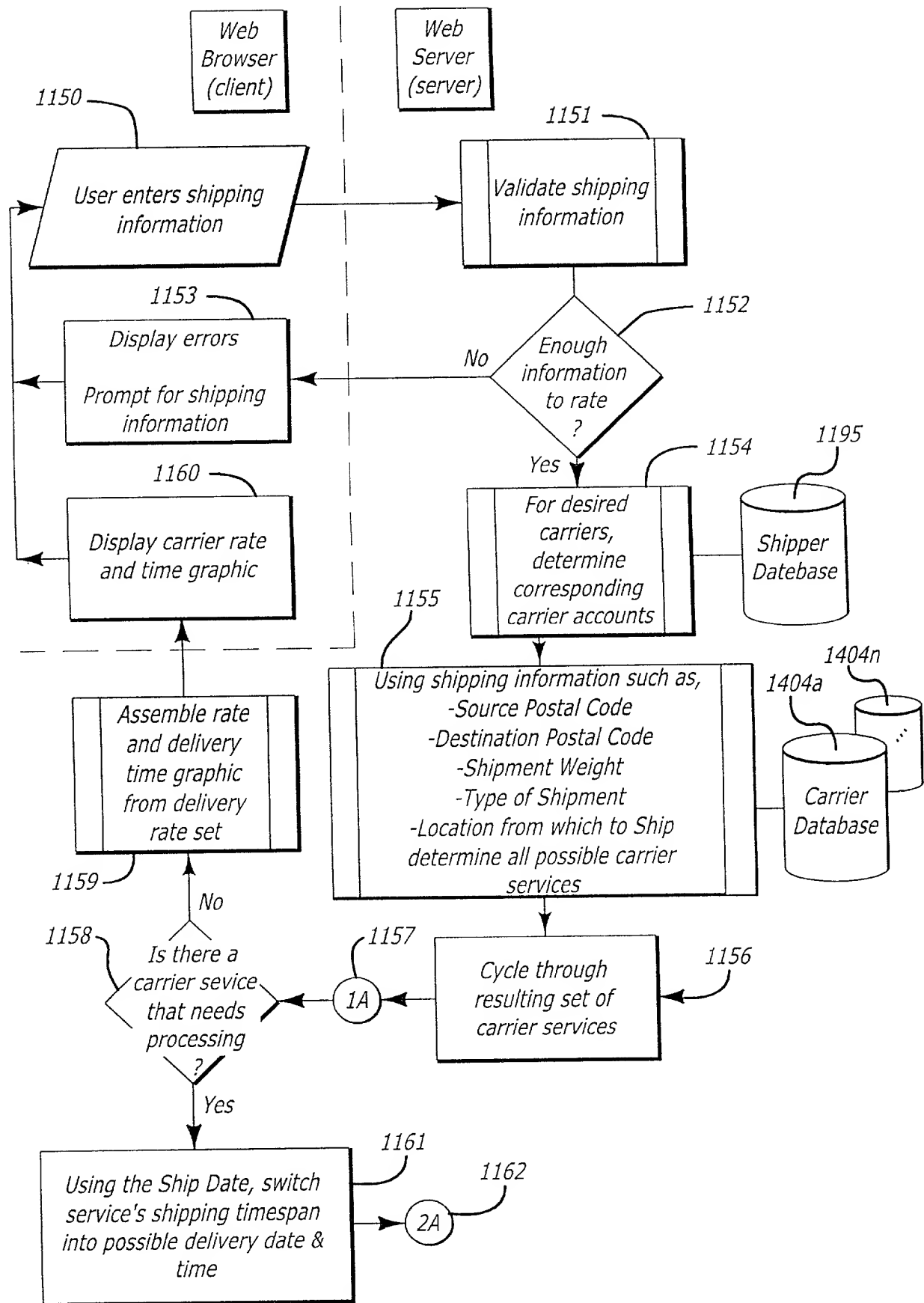


FIG. 39a

FIG. 39b

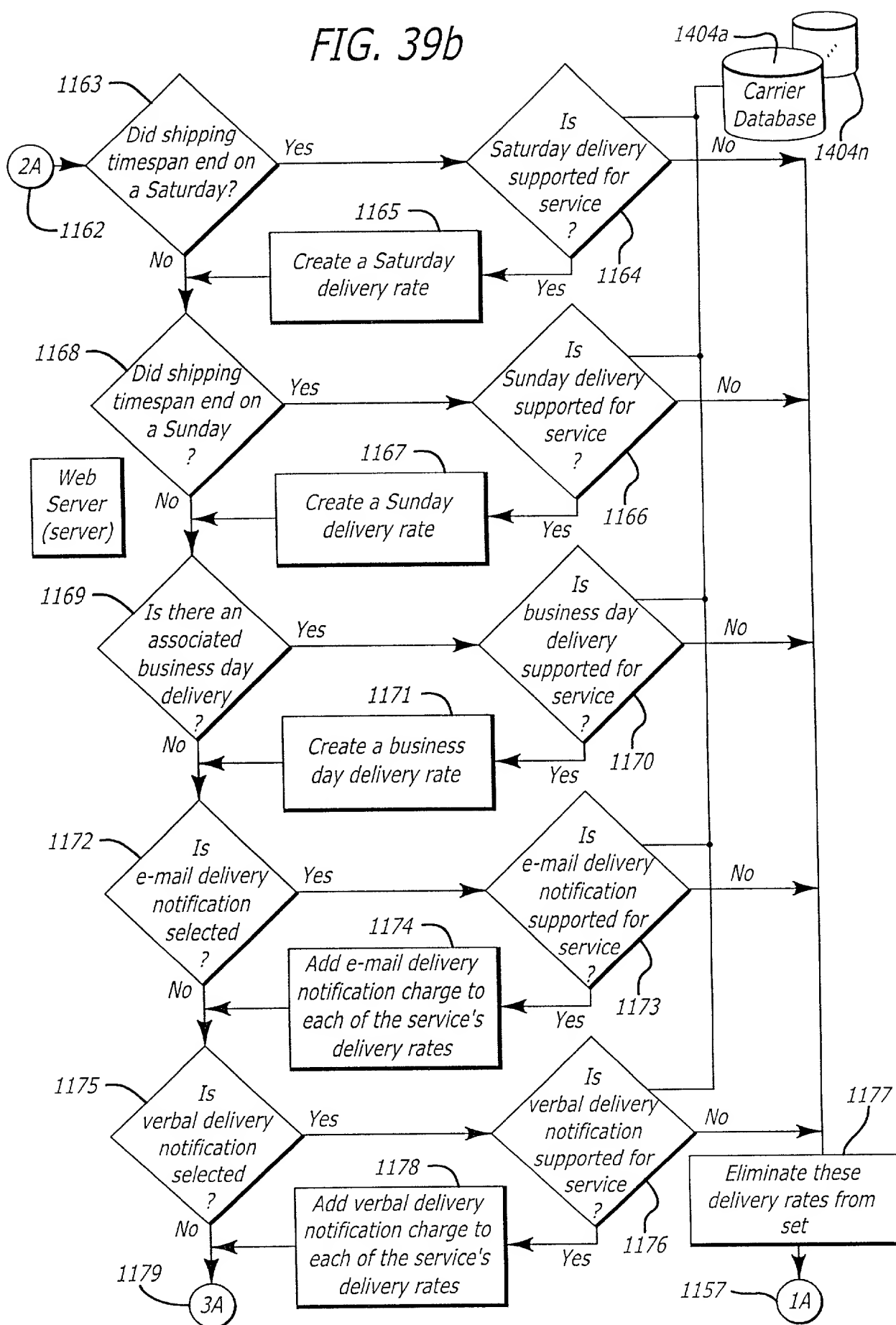
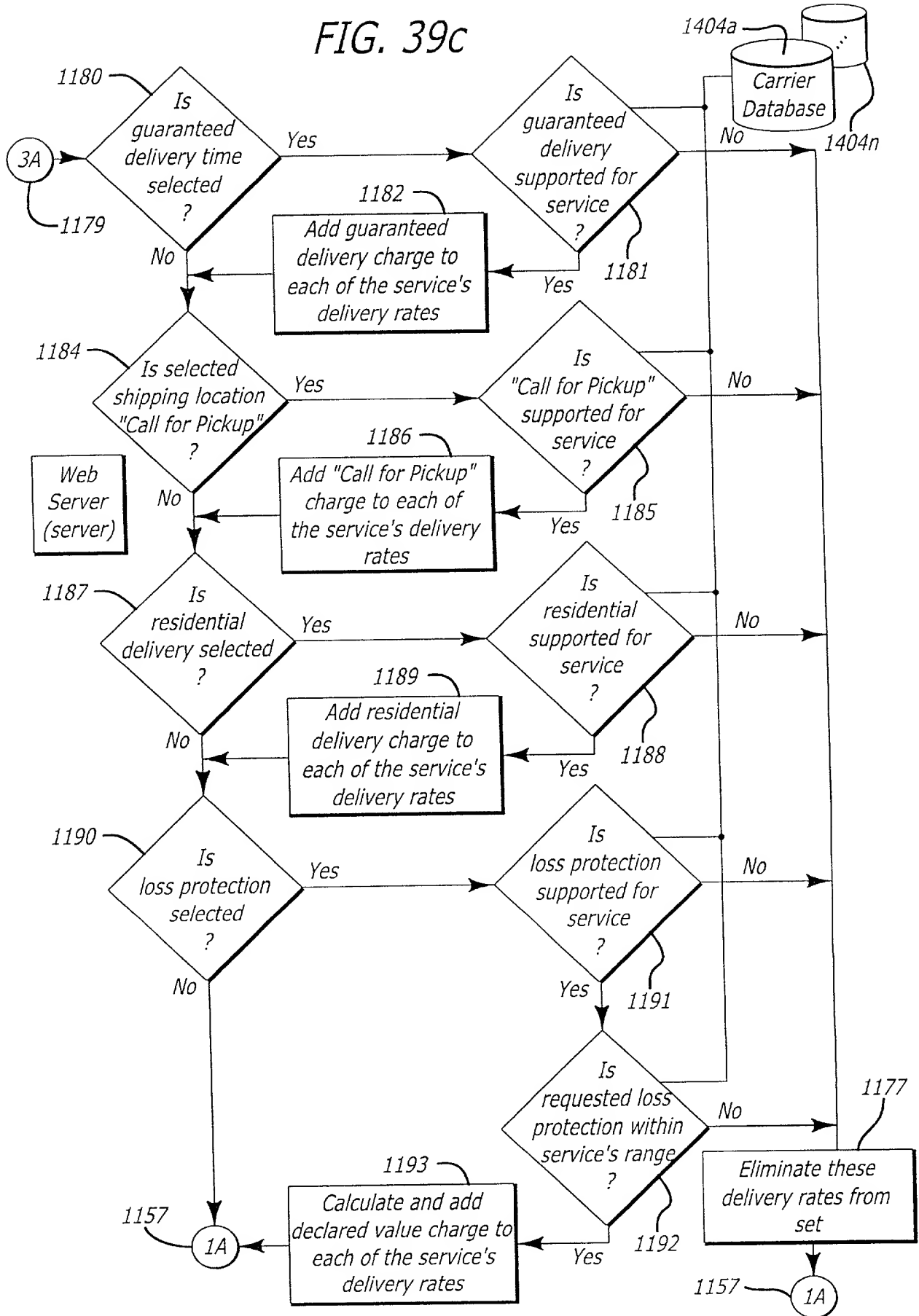


FIG. 39c



000001/058960

# iShip.com

## The Internet Package Shipper

RATES & DELIVERY TIMES - Place cursor over square next to the rate to view carrier and service

	THU 12 NOV 98	FRI 13 NOV 98	MON 16 NOV 98	WED 18 NOV 98	Carriers
10:30 AM	<input checked="" type="checkbox"/> \$52.25				<input checked="" type="checkbox"/> Airborne
12:00 PM		<input checked="" type="checkbox"/> \$29.35			<input checked="" type="checkbox"/> FedEx
3:00 PM	<input checked="" type="checkbox"/> \$40.10				<input type="checkbox"/> UPS
5:00 PM		<input checked="" type="checkbox"/> \$21.25	<input type="checkbox"/> \$16.40	<input type="checkbox"/> \$7.28	<input type="checkbox"/> USPS

USPS Priority Mail

320

Enter your Zip Code and other options, then click Get Rates

- The Zip Code where the item would be delivered is:
- The delivery address for the item would be:
- ☒ Business ☐ Residence
- I want the service to have a guaranteed delivery time: ☐ Yes ☒ No

Click the 'Back' on your browser to return to item page

Shipping services and rates provided by [Ship.com](http://Ship.com), The Internet Package Shipper

FIG. 40

XXXXX.com - Your Favorite Browser  
File Edit View Go Favorites Help  
Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print Edit  
Address http://www.someaddress.com

Home Sell It Ship It Track It Help iShip.com

My E-Commerce  
Selling Preferences  
Create Link  
Request Buyer Info  
Log Off

Buyer

When you are ready to complete the sale with your Buyer, enter the Buyer's Name and E-Mail along with information about the item you are selling. When you have finished, iShip.com will send an e-mail to the Buyer and collect their Shipping Address, Service selection and Payment Method.

When the Buyer has provided the information you will be notified by e-mail and an entry will be placed in your Shipping Log.

Buyer Name: 351  
E-Mail: 352  
Order / Item #: 353  
Description of Goods: 354a 354b 354c  
Message to Buyer: 355a 355b 355c

Request Buyer Info

Next > 102 104 105 Cancel Help

Internet

FIG. 41

FIG. 42



Shipping information for item #1234567890 -Message (Plain Text)									
Reply	Reply to All	Forward	Print	Flag	Delete	Font	?		
File	Edit	View	Insert	Format	Actions	Help			
From:	iShip@iship.com			370		Sent: Fri 12/3/99 2:48 PM			
To:	John@iship.com			352		353			
Cc:									
Subject:	Shipping information for item #1234567890								
John Shipper has requested that you provide shipping information so that a package can be sent to you. Here is a copy of your transaction									
* TO: Joe Buyer 351									
* FROM: John Shipper 375									
* REF: 1234567890 353									
* Description: Packet of Information 354a									
To respond to this e-mail and provide the information requested, click on the link below and follow the on-screen instructions:									
372-1									
---> <a href="https://iship.com/pub/BuyerProcess.asp?T=MA6V1XZ6TPCDG">https://iship.com/pub/BuyerProcess.asp?T=MA6V1XZ6TPCDG</a> 372									
372-2 372-3									
If your e-mail does not support hyperlinks, enter the web address above into your web browser.									
DO NOT REPLY DIRECTLY THIS E-MAIL. If you have questions or need technical support, e-mail us at <a href="mailto:support@iship.com">mailto:support@iship.com</a> .									

FIG. 43

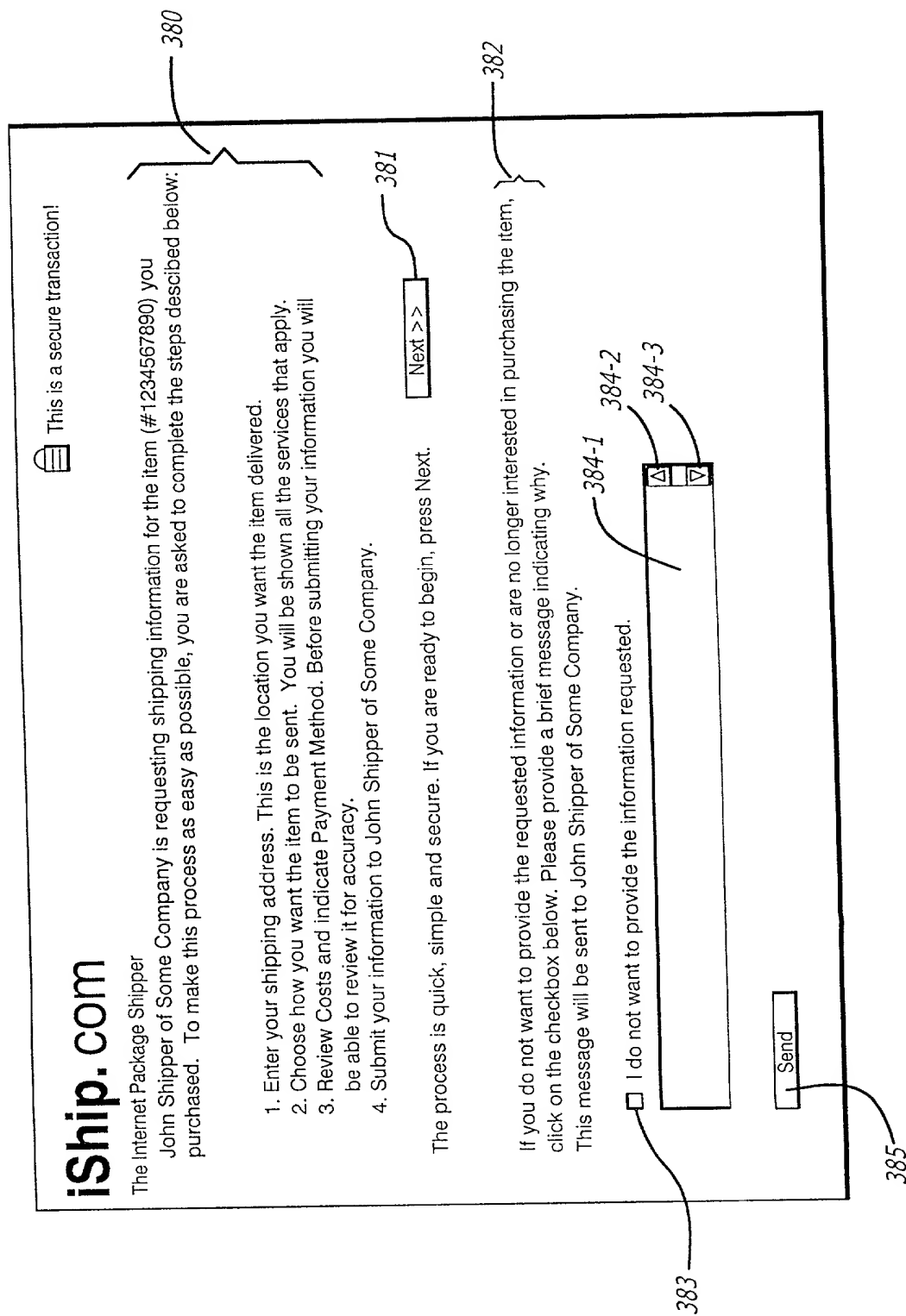


FIG. 44

**iShip.com**  
The Internet Package Shipper

Enter your shipping address, then click Next.

Company/Name:  
Attention:  
Street:  
Floor/Room:  
Department:  
City:  
State:  
Zip Code:  
Telephone:  
Fax:

<< Back   Next >>   Help

FIG. 45

**iShip.com**  
The Internet Package Shipper

**To select a service, click on a rate.**

**RATES & DELIVERY TIMES** - Place cursor over square next to the rate to view carrier and service

	THU 12 NOV 98	FRI 13 NOV 98	MON 16 NOV 98	WED 18 NOV 98
10:30 AM	<input checked="" type="checkbox"/> \$52.25			
12:00 PM		<input checked="" type="checkbox"/> \$29.35		
3:00 PM	<input checked="" type="checkbox"/> \$40.10			
5:00 PM		<input checked="" type="checkbox"/> \$21.25	<input checked="" type="checkbox"/> \$16.40	<input type="checkbox"/> \$7.28

**Carriers**

- ☒ Airborne
- ☒ FedEx
- ☐ UPS
- ☐ USPS

**USPS Priority Mail**

**Select from these options, then click Get Rates**

**I want the service to have a guaranteed delivery time:**

Yes ☐ No ☐

**Get Rates** **<<Back** **Help**

Shipping services and rates provided by [Ship.com](#). The Internet Shipper

FIG. 46

410

**iShip.com**

The Internet Package Shipper

Verify the information and select Payment Method, then click Send.

**Address**

Some Company  
1234 X Ave.  
Suite 4567  
Marketing  
Someplace, WA, 12345  
Phone (888)888-8888  
Fax (888)888-8889

**Service**

Carrier: UPS  
Service: Ground

**Charges**

The Shipping Charges are: \$ 7.28

The Item Cost Is: \$ 500.00

The total amount you owe is: \$ 507.28

**Payment**

Please select how you will pay for this item.

Payment Method: 

413-1

413-2

Card No.: 

414

Expiration Date: 

415-1

415-2

416-1

416-2

If the cardholder Name and Billing Address are not the same as the Shipping Address entered, click Cardholder Information.

<< Back

Cardholder Information

Send

Help

<< Back

Cardholder Information

Send


Help

This is a secure transaction!

Shipping services and rates provided by iShip.com, The Internet Shipper

FIG. 47

102



The Internet Package Shipper

This is a secure transaction!

Enter the Cardholder information, then click Next.

• Enter the Name as it appears on the card

Name:

• Enter the billing information as it appears on your card statement.

Street:

State:

Zip Code:

422-1

422-2

< Back

Save

Help

420

421

423

424

FIG. 49

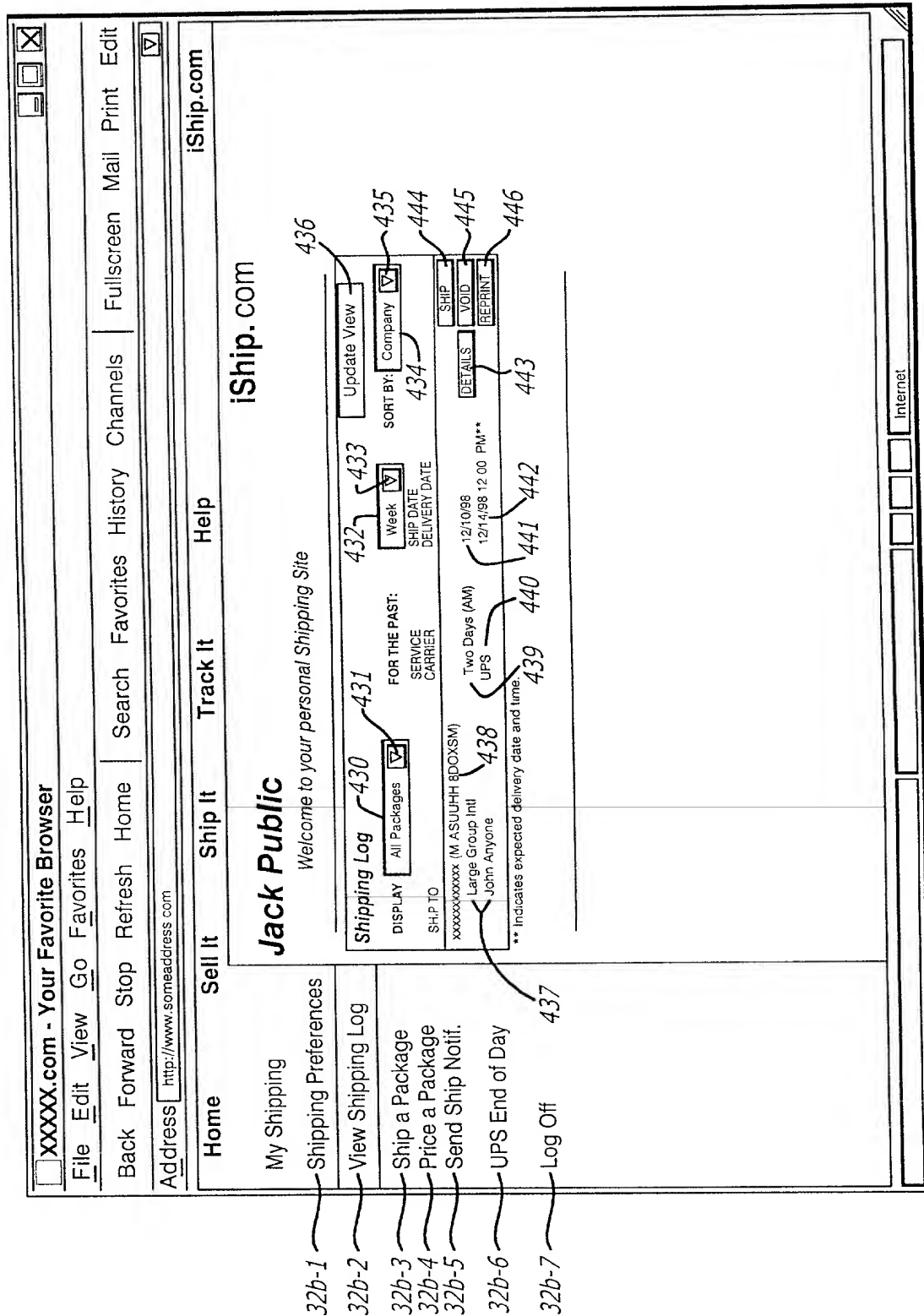


FIG. 50



000001" / 2063360

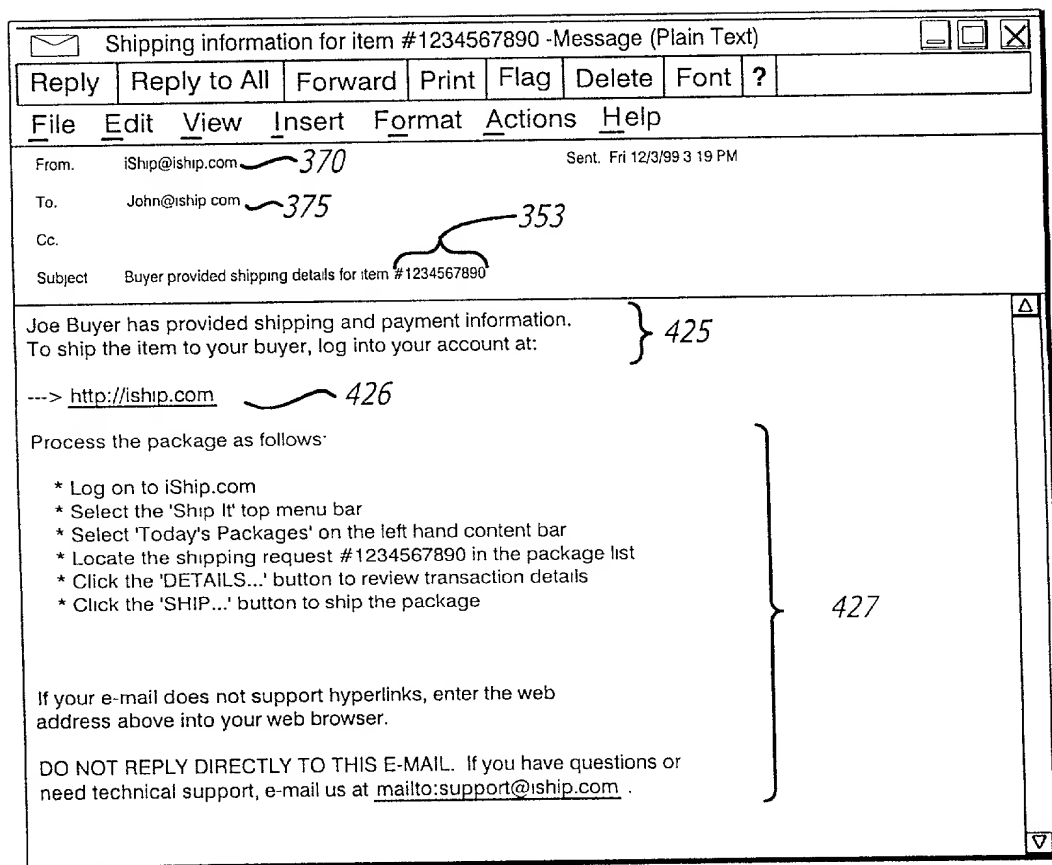


FIG. 51

009007 206860

Package

Confirm that this is the correct package before continuing.

Recipient:  
Mary Jones  
Some Company  
28 Your St SW  
Any Town, IL 60600

View Details

Est. Weight: 5 lbs.  
Packaging: Other L 25 5 in W 25 5 in H 25 5 in  
Service: FedEx Priority Overnight  
Service Options: Declared Value \$ 750 00  
E-Mail Notification  
Signature not required  
Service must be guaranteed  
Verbal Notification  
Reference #1: ABCDEFGHIJKLMNO  
Reference #2: 123456789012345  
Desc. of Goods: 20 Anti-Roadrunner Heat Seeking missiles  
ARHS Mobile Launch System

451

452

If the package above is the package you want to void, press the "Void Package" button

VOID PACKAGE

Void Package

Cancel

Help

453

FIG. 52

Package

Confirm that this is the correct package before continuing.

Recipient:  
Mary Jones  
Some Company  
28 Your St SW  
Any Town, IL 60600

View Details

Est. Weight: 5 lbs.  
Packaging: Other L 25 5 in W 25 5 in H 25 5 in.  
Service: FedEx Priority Overnight  
Service Options: Declared Value \$ 750 00  
E-Mail Notification  
Signature not required  
Service must be guaranteed  
Verbal Notification  
Reference #1: ABCDEFGHIJKLMNO  
Reference #2: 123456789012345  
Desc. of Goods: 20 Anti Roadrunner Heat Seeking missiles  
ARHS Mobile Launch System

451

454

To Reprint your shipping label:  
1. Make sure your printer is running, has paper and is setup to print in "Portrait" mode  
2. Press the "Generate Label" button below.  
3. Using your browser's "Print" command, print the shipping label.

Reprint Label

Generate Label

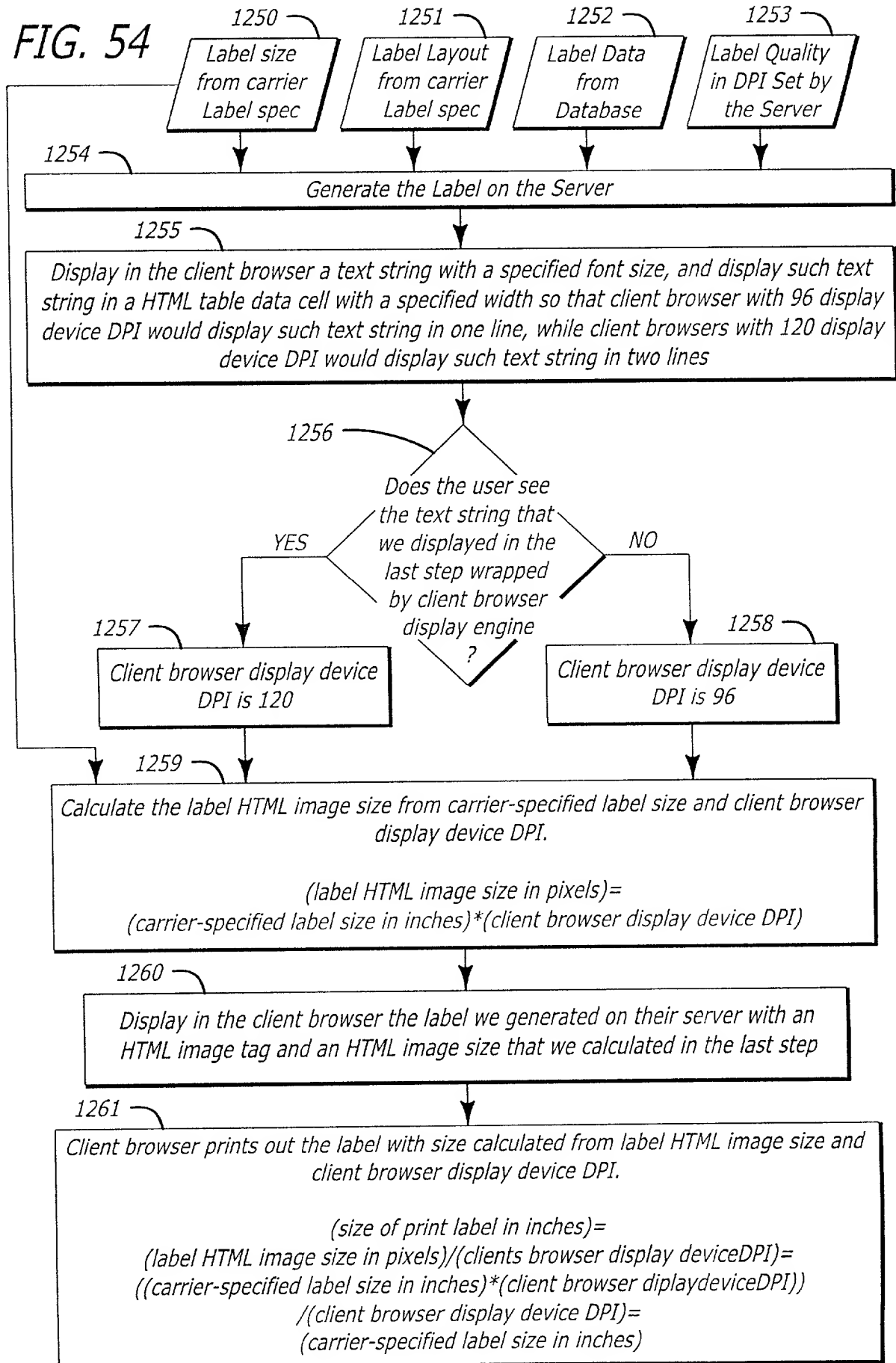
Cancel

Help

455

FIG. 53

FIG. 54



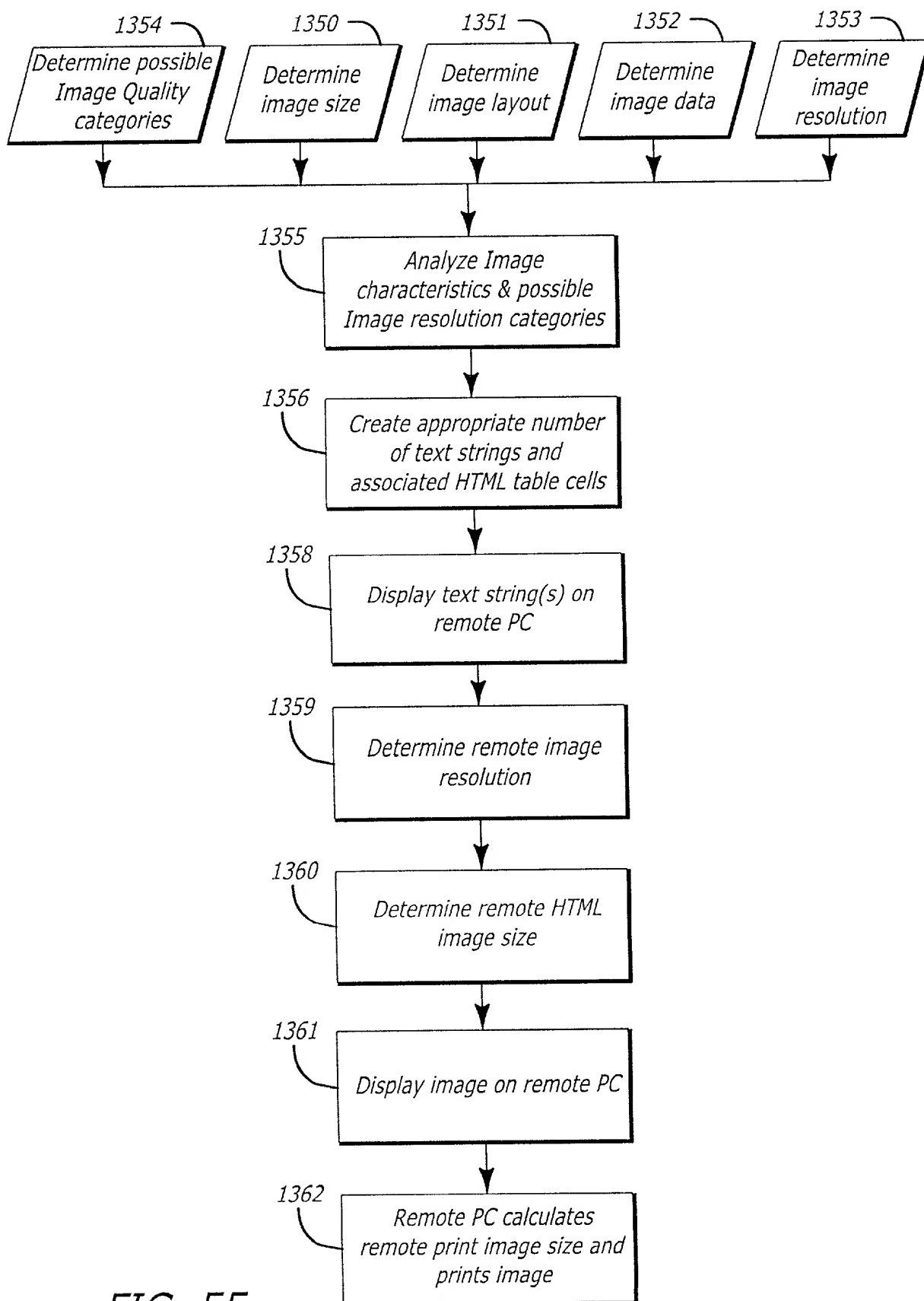


FIG. 55

**Your Package has been Completed!**

Your iShip Package Number is:

M J2UONK 4RFCBK — 1120

You must drop off your package at an **iShip Center** in Bellevue, WA 98005 before **5:00 PM** on **Saturday, 10/3/98** in order for your package to arrive at its destination by **7:00 PM** on **Wednesday, 10/7/98**.

Void Package

 — 1121

Press "Void Package" to void this transaction.

To ship another package press New Package or Done to leave.

**Ship a Package**

New Package

Done

Help

FIG. 56

1122 1123

**Your Package has been Completed!**

Your iShip Package Number is:

M J2UONK 4RFCBK — 1120

You must drop off your package at an **FedEx Drop Box** in Bellevue, WA 98005 before **5:00 PM** on **Saturday, 10/3/98** in order for your package to arrive at its destination by **7:00 PM** on **Wednesday, 10/7/98**.

{

1125 To Print your shipping label:

1. Make sure your printer is running, has paper and is setup to print in "Portrait" mode.
2. Press the "Generate Label" button below.
3. Using your browser's "Print" command, print the shipping label

Generate Label

 — 1124
 

Void Package

 — 1121

Press "Void Package" to void this transaction.

To ship another package press New Package or Done to leave.

**Ship a Package**

New Package

Done

Help

FIG. 57

1122 1123

09685077 100600

1130

Scroll to Bottom for instructions

SHIP TO Joe Receiver (877) 555-9876 His Company 1234 N. Main Street Suite E991 Yourtown, AL 20002-1001	ACME INC. (234) 555-3412 4515 Elm Street NW Suite B431 Anytown, CA 91354	12 LBS 1 OF 1 DWT 50.30,12 O/S AH
REF #1 12345678901234567890123456789012345 REF #2 12345678901234567890123456789012345 ISHP CODE # FMTW37N975V	ADULT SIGNATURE REQUIRED	VCD
SHIP TO POSTAL CODE (420) 98005-1885		(420) SHIP TO POSTAL CODE
UPS EARLY A.M. TRACKING # - 1Z 337 4WS 42 1234 5678		1+S
12 LBS 1 OF 1 DWT 50.30,12 O/S AH		12 LBS 1 OF 1 DWT 50.30,12 O/S AH

Ship 1.00

SHIPPING LABEL PRINTING INSTRUCTIONS

1. Click the Print Label button or use the "Print" command in your browser to print your label.
2. Fold or cut the printed page along the line you see above.
3. Place the label in the transparent pouch and affix to your package so that the entire label is visible.

Print Label

Done

FIG. 58

XXXXX.com - Your Favorite Browser

File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print Edit

Address <http://www.somedomain.com>

Home Sell It Ship It Track It Help iShip.com

My Shipping

Shipping Preferences

View Shipping Log

Ship a Package

Price a Package

Send Ship Notif.

UPS End of Day

Log Off

Notify

Complete the fields below to notify your Buyer when the item is shipped.

To send a Ship Notification e-mail, complete the required fields and press Send.  
You can include a brief message with the Notification.

Name: Jonathan Receiver

E-Mail: jreceiver@somedomain.com

I will ship my package on: 12/9/98 - Today

I am shipping my package with: Airborne Express

The service is: Overnight Air Express

The tracking number is:

Order/Item #: 123412341234

Reference #2: 234523452345

Message:

Send Ship Notification

Send Cancel Help

Internet

FIG. 59

Messages

Please provide the Names and E-mail Addresses of the people you want to notify that a package has been sent. Indicate if they should be included on the 'TO' or 'CC' line.

1101

TO: ☐

1102

Name:

1103

E-Mail:

1104

1107

CC: ☐

1108

Name:

E-Mail:

OK

Cancel

Help

FIG. 60



XXXXX.com - Your Favorite Browser

File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print Edit

Address http://www.someaddress.com

Home Sell It Ship It Track It Help

My Shipping

Shipping Preferences

View Shipping Log

Ship a Package

Price a Package

Send Ship Notif.

UPS End of Day

Log Off

Summary

Est. Weight: 5.00 lbs. Billed weight: 5.00 lbs  
Packaging: Other L 5 in x W 10 in x H 15 in  
Service: UPS 2nd Day Air A.M.  
Service Options: Declared Value \$500.00  
E-mail Notification  
Guaranteed Delivery  
Reference #1: 1234567890  
Reference #2: ABCDEFGHIJ  
Desc of Goods: Description of Goods  
Buyer Payment: Master Card - 4444 4444 4444 4444  
Exp Date - Oct 1999

Method: Pay by credit card  
Card No: 4111-1111-1111-1111  
Exp. Date: 12 / 98 Type: Visa

If the CardHolder Name and Billing Address are not the same as the Return Address press:  
CardHolder Information

Charges

Base Service Charge: \$ 17.00  
Service Options: \$ 1.65  
Total Charge: \$ 18.65  
Additional Charges: \$ 3.25  
Buyer's Total: \$ 21.90  
Buyer's Quote: \$ 21.45

By shipping your package with iShip.com you agree to all Terms of Service specified by iShip.com or the selected carrier on any applicable waybill, tariff or service guide

Ship a Package

Recipient: Jonathan Receiver  
Company 1  
6440 Atlantic Springs Road  
Suite 110  
Any Town, NC 27818  
(555) 555-3456  
Jreceiver@someomain.com  
Return Address: David Sender  
Company 2  
2515 140th Ave NE  
Suite E110  
Operations  
Someplace, WA 98005  
(555) 602-5028  
dsender@adomain.com  
Package will be shipped from:  
Retail Shipping Center  
10600 10th StreetNW  
Bellevue, WA 98000-4003  
(555) 555-3456

< Back Finish Cancel Help

Internet

FIG. 61

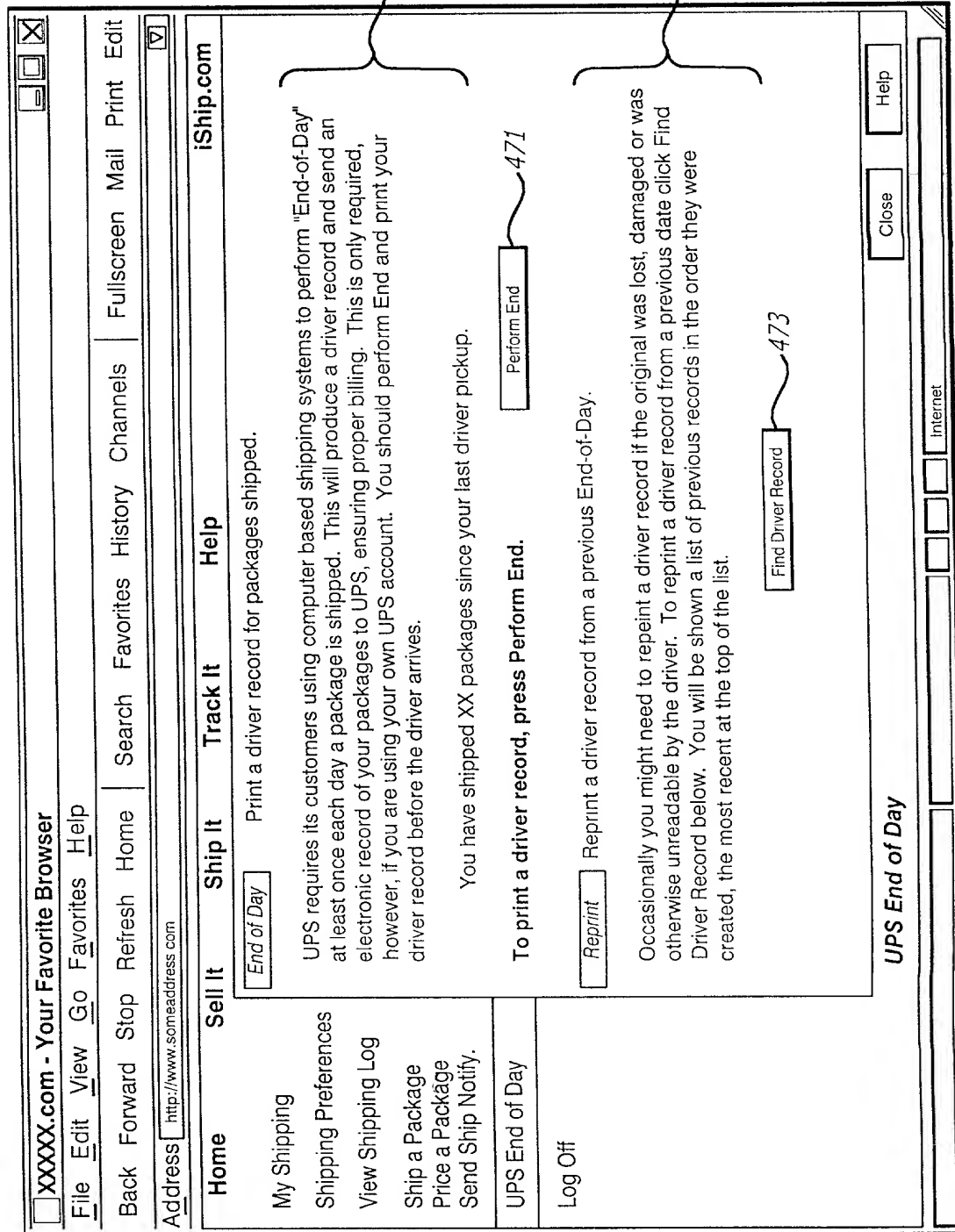


FIG. 62

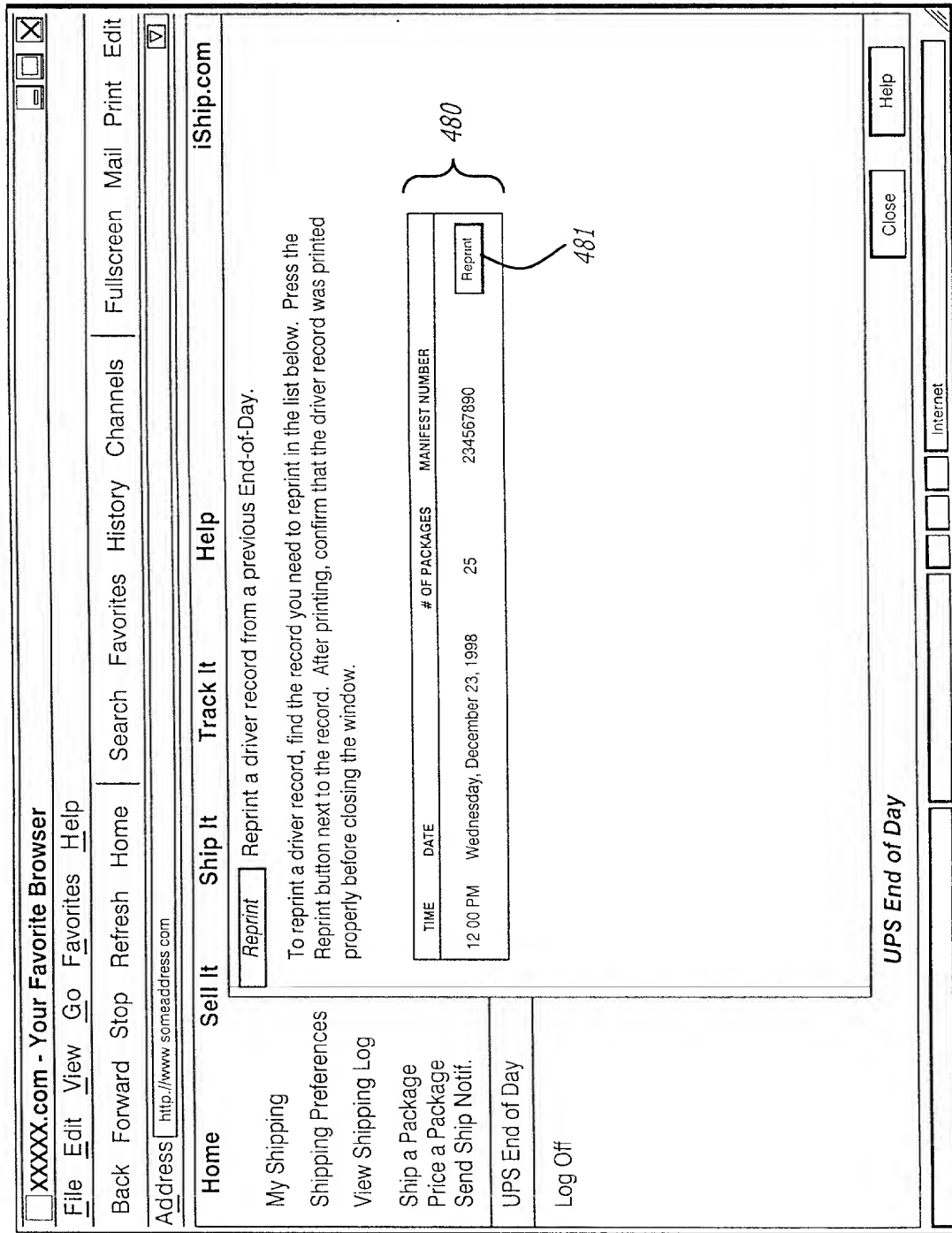
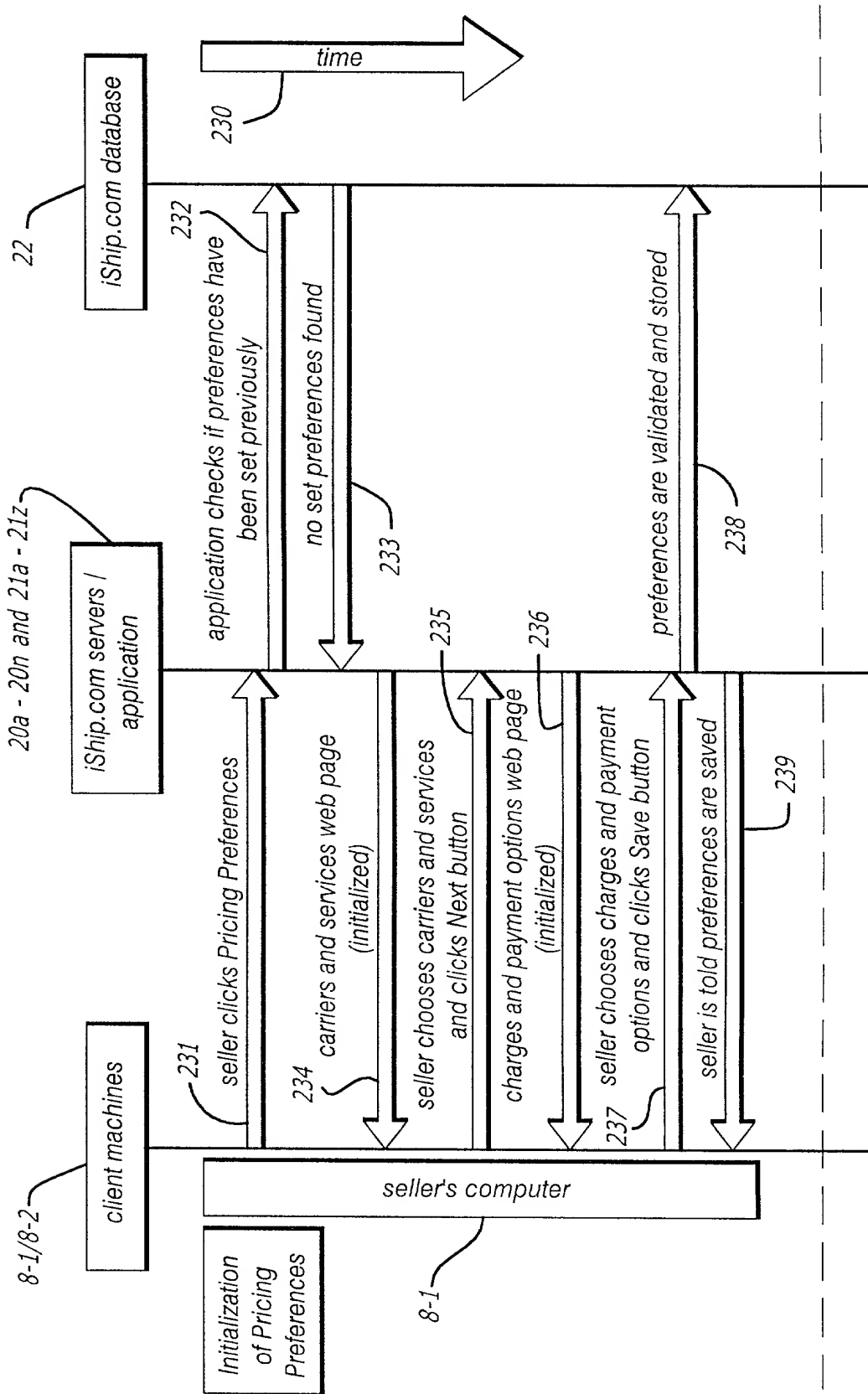


FIG. 63

FIG. 64a-1



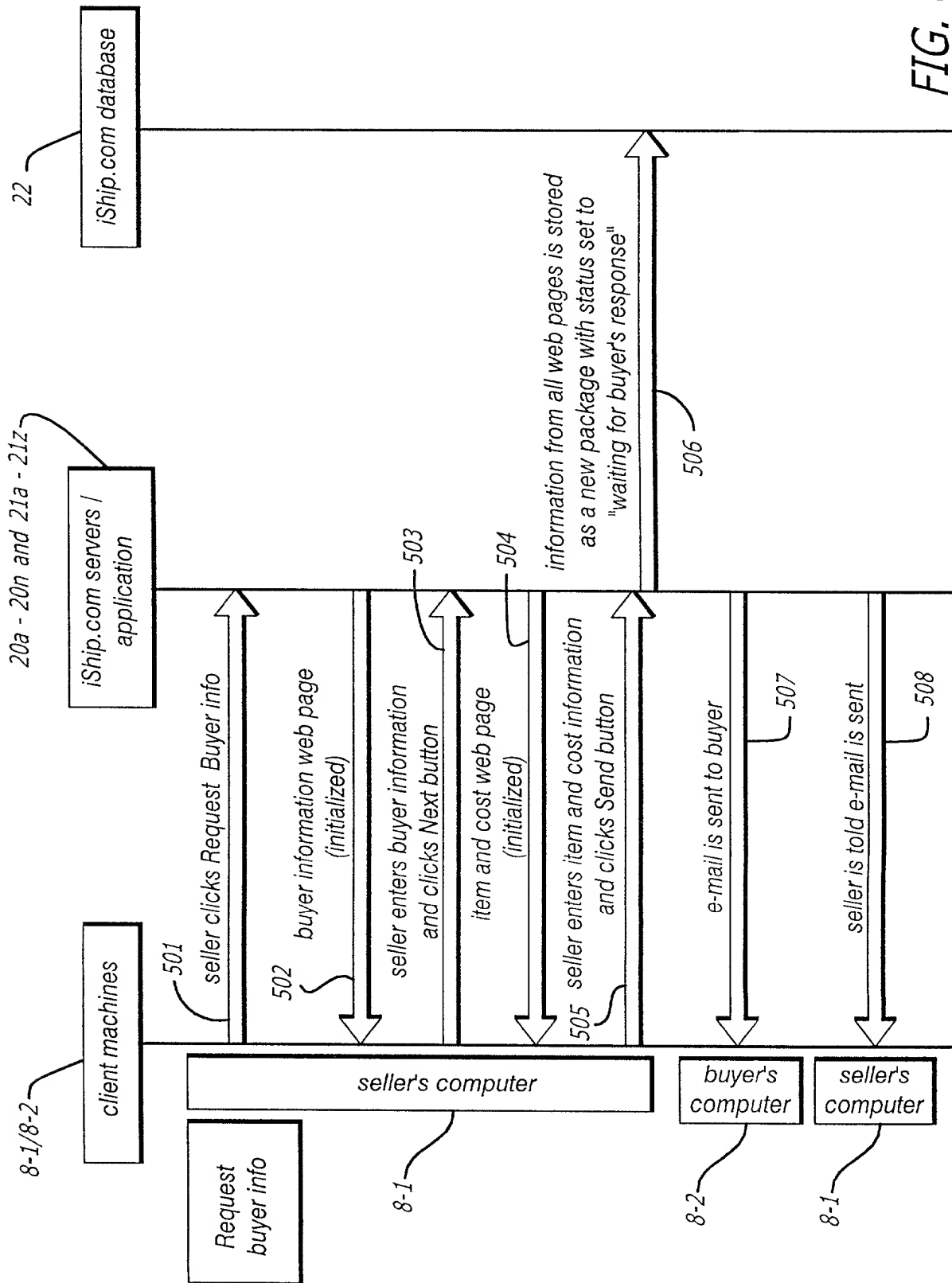


FIG. 64a-2

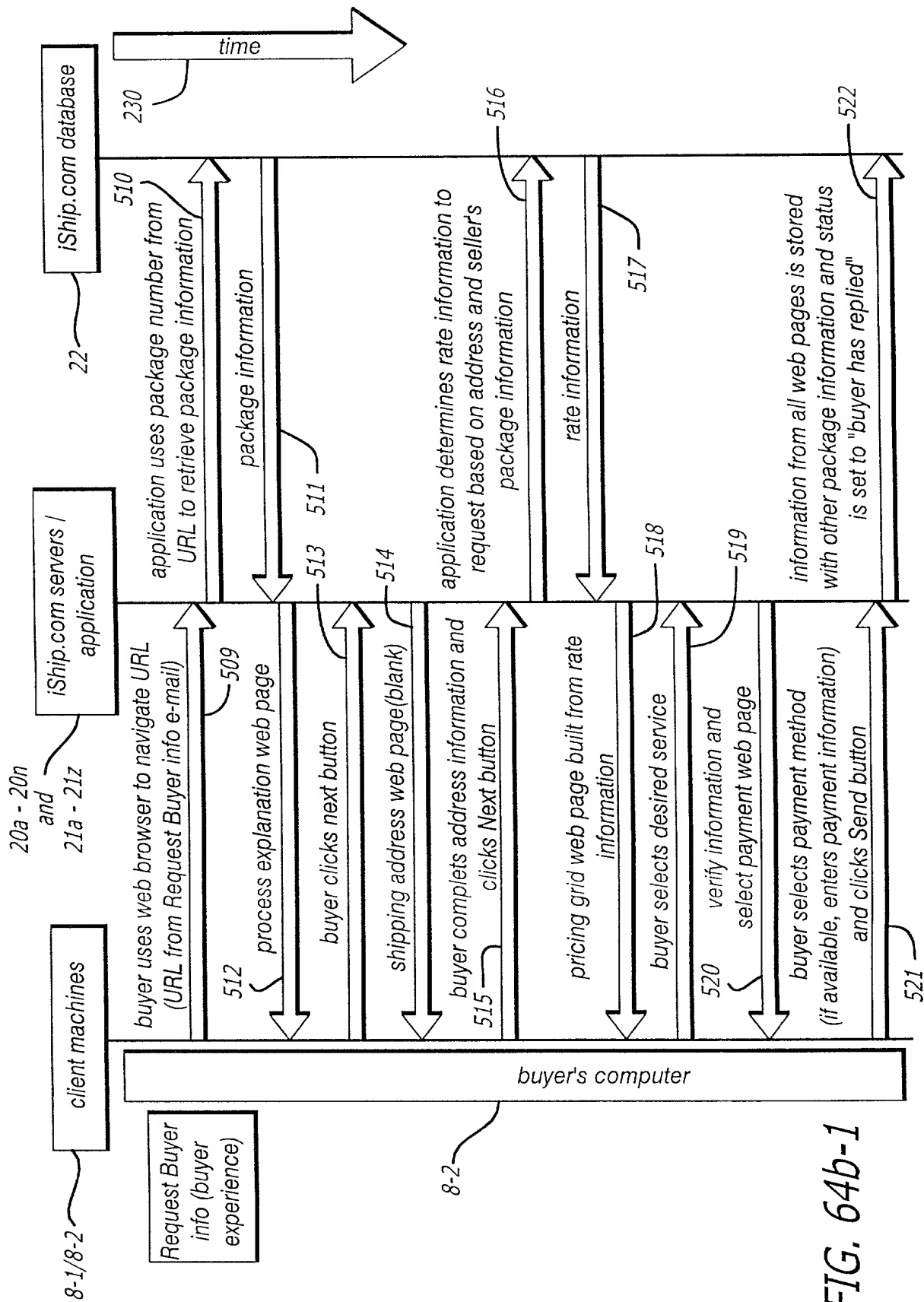


FIG. 64b-1

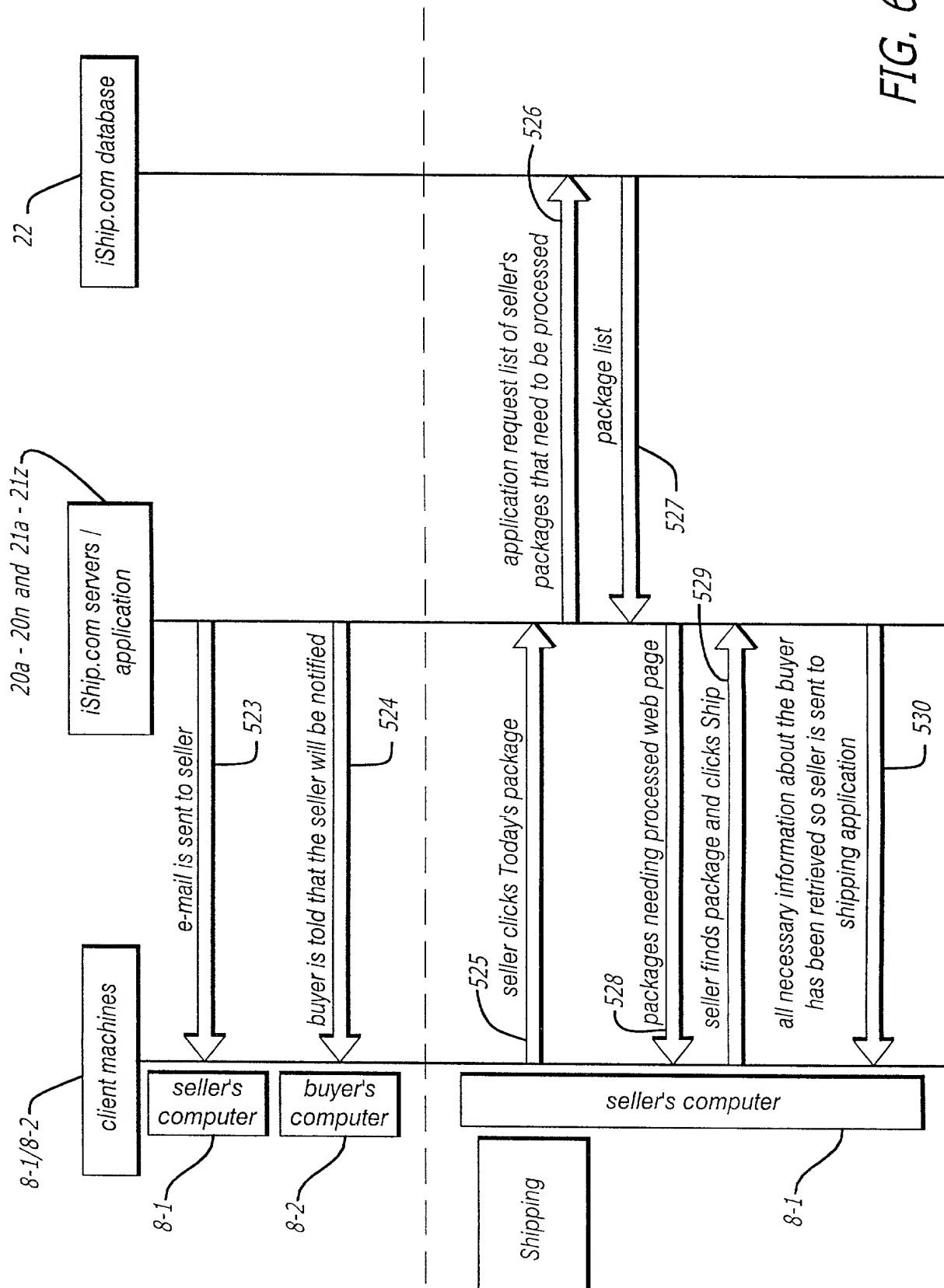


FIG. 64b-2

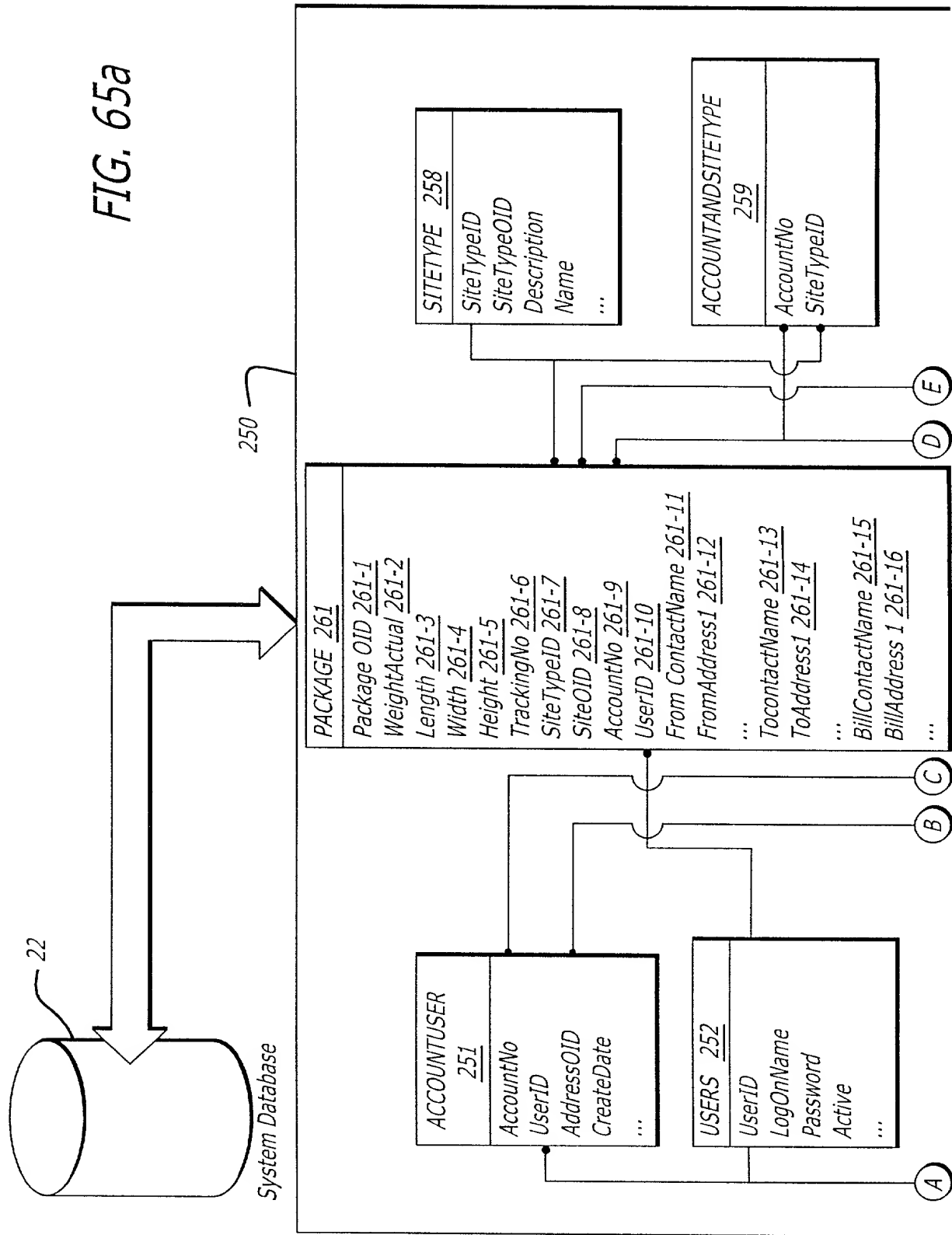
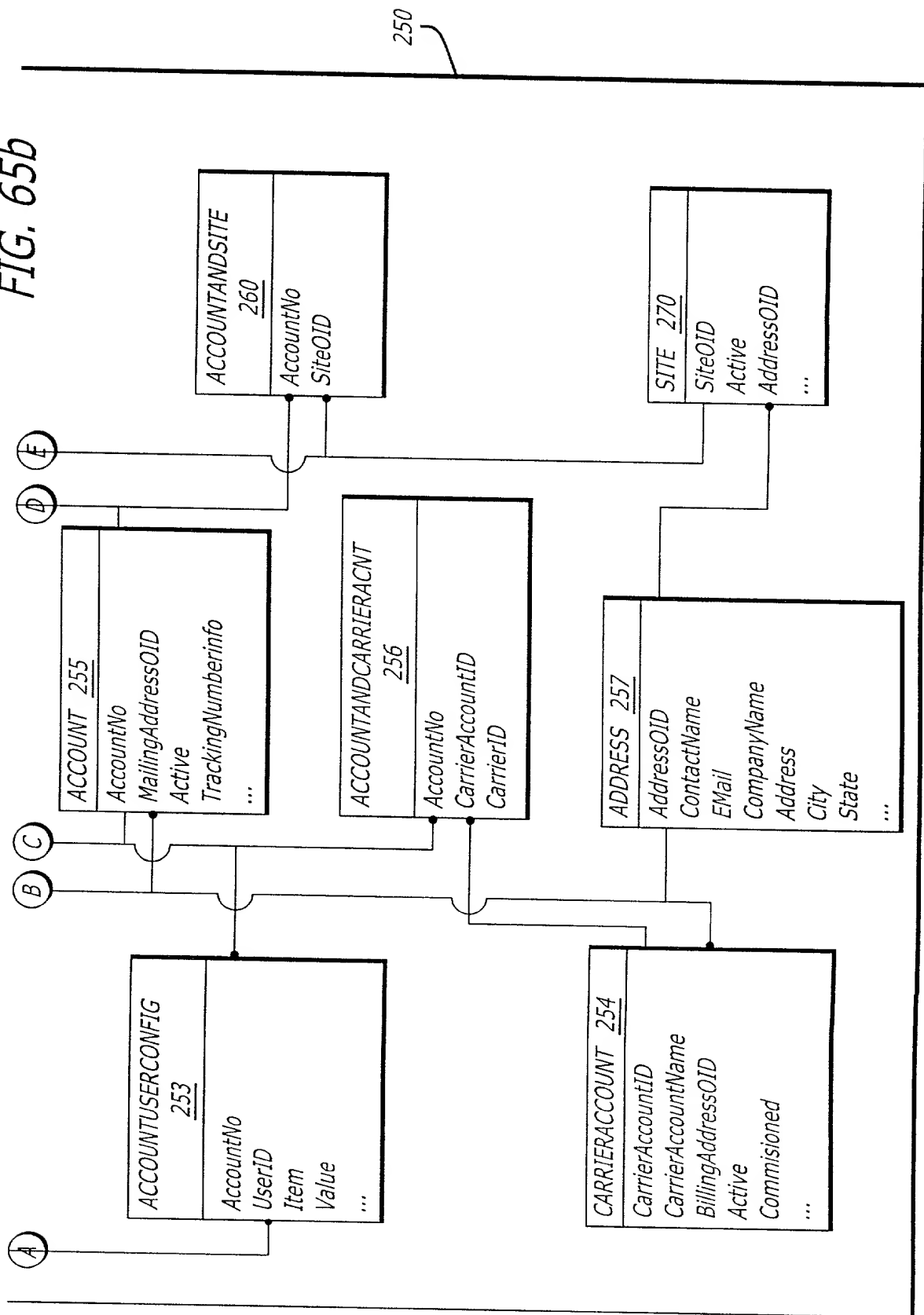




FIG. 65b



```

<iship.com.request xmlns="x-schema:http://iship.com/api/schema/trackrequest.xml"
transactionid="3855BD2185E111d3984400A0C9D6C226">
  <header mode="interactive">
    <version major="0" minor="1"/>
    <batch id="AE5E54F08E2311d3984900A0C9D6C226"
      url="http://shasta/api/track/trackresponse.asp" email="bob@iship.com"/>
  </header>
  <signon sessionid="" userid="test" password="7777777"/>
  <trackit>
    <package sequencenumber="1">
      <trackingnumber carrier="ups">
        1Z1812530202075466
      </trackingnumber>
    </package>
  </trackit>
  <logoff/>
</iship.com.request>

```

*FIG. 66*

```

<iship.com.response transactionid="3855BD2185E111d3984400A0C9D6C226">
  <status ishiprcode="0" signonrcode="0" trackitrcode="0" parsercode="0"
  systemrcode="0"/>
  <trackit>
    <package sequencenumber="1" packagercode="0">
      <deliveredto></deliveredto>
      <deliverylocation>LEFT AT 3S</deliverylocation>
      <signedby>HOWARD</signedby>
      <lastscan>9/1/99 1:50:00 PM DELIVERY </lastscan>
      <status>Delivered</status>
      <deliverytime>9/1/99 1:50:00 PM</deliverytime>
      <carrier>UPS</carrier>
      <service>2ND DAY AIR</service>
      <shipdate>8/28/99 </shipdate>
      <trackingnumber>1Z1812530202075466</trackingnumber>
      <scanlocation>FORT HAMILTON, NY US</scanlocation>
      <weight>400</weight>
    </package>
  </trackit>
</iship.com.response>

```

*FIG. 67*

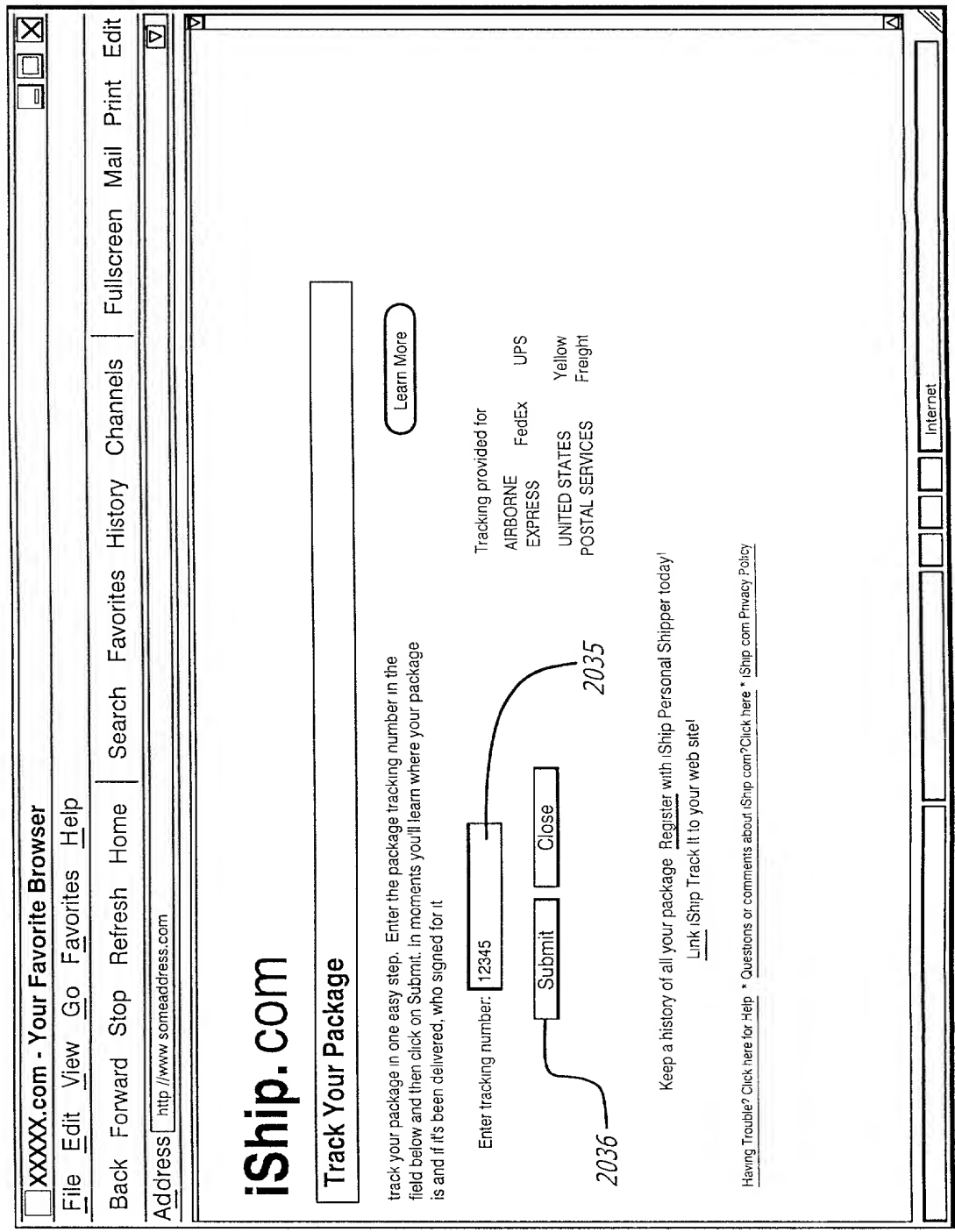


FIG. 68



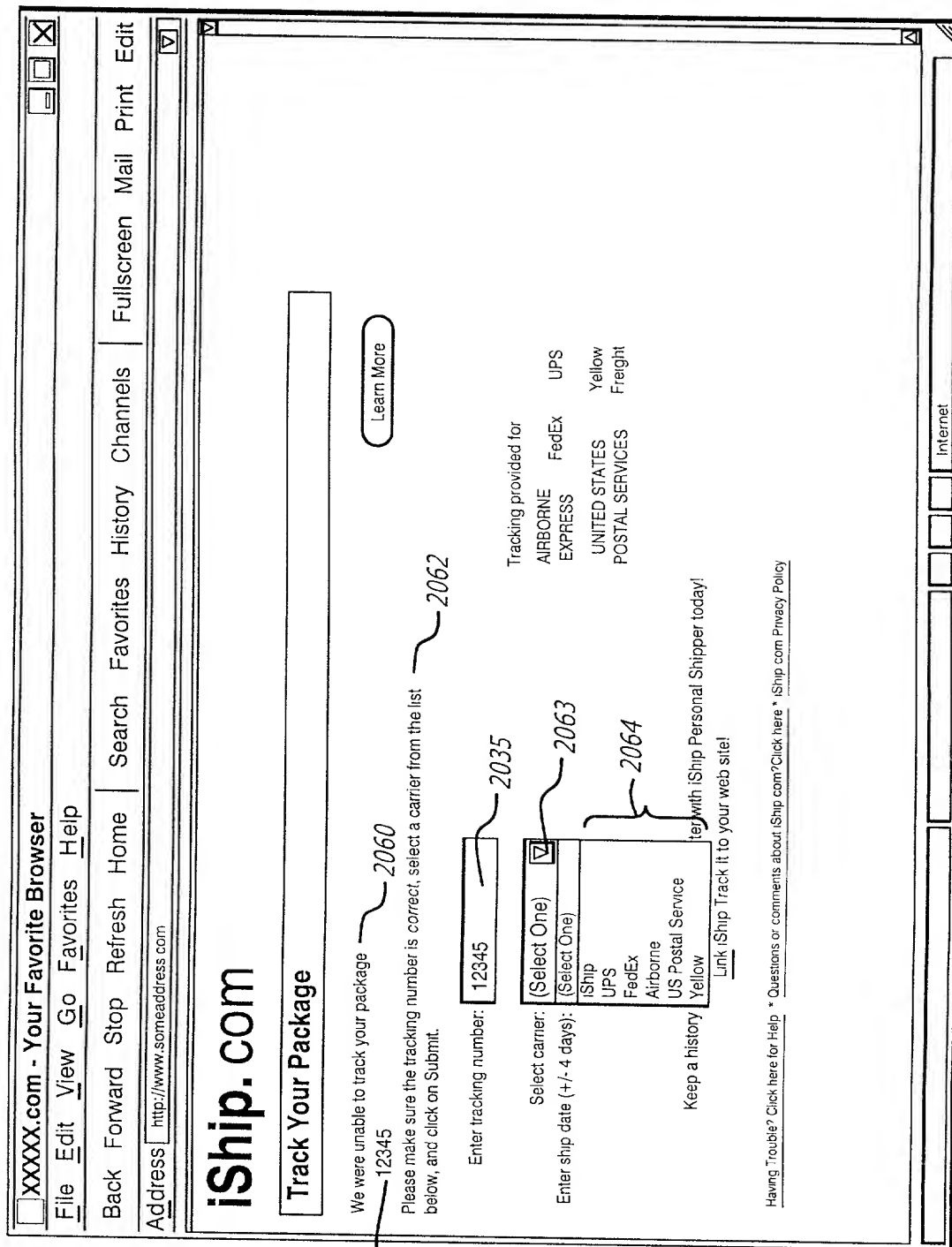


FIG. 70

XXXXX.com - Your Favorite Browser

Address  http://www.someaddress.com

# iShip.com

## Your Tracking information

Status:  
 Last Scan:  
 Delivered To:  
 Delivery Date:  
 Delivery Time:  
 Delivery Location:  
 Signed By:  
 Carrier:  
 Service:  
 Tracking Number:

DELIVERED  
 6/11/99 8:30:00 AM DELIVERY  
 SOMEPLACE, WA US  
 Friday, June 11, 1999  
 8:30:00 AM  
 RECEIVER  
 CHRIS  
 UPS  
 GROUND  
 128595610344113190

2071  
 2072  
 2073  
 2074  
 2075  
 2076  
 2077  
 2078  
 2079  
 2080

Status as of Monday, November 29, 1999 9:56:30 AM Pacific Standard Time

## Track Another Package

Enter tracking number:

Tracking provided for:  
 AIRBORNE      FedEx      UPS  
 EXPRESS  
 UNITED STATES      Yellow  
 POSTAL SERVICES      Freight

2035      2036

Keep a history of all your package. [Register](#) with iShip Personal Shipper today!

[Link iShip](#) Track It to your web site!

Having Trouble? [Click here for Help](#) \* [Questions or comments about iShip.com? Click here](#) \* [iShip.com Privacy Policy](#)

FIG. 71



FIG. 73

A screenshot of a web dialog box titled "Tracking--Web Page Dialog". It contains a text input field for "Tracking No:" with the value "3962816712". Below the input field is a button labeled "Find Package...". At the bottom of the dialog are two buttons: "Track" and "Close".

2100

2101

2102

FIG. 74

A screenshot of a web dialog box titled "Tracking--Web Page Dialog" showing tracking details. The details are listed as follows:

Status:	Delivered
Delivery Date:	Tue. Oct. 26, 23:00:00 PDT 1999
Tracking No:	03962816712
Service:	Airborne Express Delivery
Signed By:	U.R. LASTNAME
Delivered To:	Left with Receptionist
Last Scan:	Delivered 10/26/99 11:30AM

At the bottom of the dialog are two buttons: "Track Another" and "Close".

2103

2104

FIG. 75

A screenshot of a web dialog box titled "Tracking--Web Page Dialog" showing an error message. The tracking number "264376909" is entered in the input field. The error message reads: "Error: No information was found for this tracking number. Make sure the tracking number is correct and try again." At the bottom of the dialog are two buttons: "Track Another" and "Close".

19

2104

2105



FIG. 76

XXXXX.com - Your Favorite Browser

File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print Edit

Address http://www.someaddress.com

Home Sell It Ship It Track It Help

John Shipper,  
Welcome to your personal Shipping Site

Shipping Log 2118 2117 2119 2120 Update View

DISPLAY: All Packages 2117 FOR THE PAST: Week 2120 SORT BY: Company 2122

SHIP TO: IN TRANSIT (M A6QWUQ-HVS312) 2080 Ground UPS 12/8/99 No Guarantee Time 2124

John Shipper

\*\*Indicates expected delivery date and time. 2125 2126 2127 2128 2129 2130

My Tracking 2110

Shipping Log 2111

View Inbound Pkgs 2112

Add Inbound Package 2113

Tracking Preferences 2114

Log Off

QuickTrack

Enter tracking number go 2115 2116

Internet

FIG. 77

FIG. 78

FIG. 79

XXXXX.com - Your Favorite Browser

File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print Edit

Address http://www.somewhere.com

Home

My Tracking

Shipping Log

View Inbound Pkgs

Add Inbound Package

Tracking Preferences

Log Off

QuickTrack

Enter tracking number

go

Sell It

Ship It

Track It

Help

Tracking

Complete the fields below to add a package to your inbound Package list.

Enter the tracking number of the package you want to add to your Inbound Package list.

Select the carrier if known or, if no carrier is selected, we will attempt to determine the carrier from the number entered. You can enter an Order/Item No. to help you identify the package.

Tracking Number: 178595610344113190

Carrier: UPS

Order/Item:

Check the box below if you would like to be notified by e-mail when the package is delivered.

We can also notify up to two others. You can include a brief message to be sent with E-mail.

☒ Notify me when the package has been delivered.

☐ E-Mail Others

Message: Your goodies.

Add Inbound Package

Add

Cancel

Help

FIG. 80

XXXXX.com - Your Favorite Browser

File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print Edit

Address http://www.someaddress.com

Home Sell It Ship It Track It Help

My Tracking

Shipping Log

View Inbound Pkgs

Add Inbound Package

Tracking Preferences

Log Off

QuickTrack

Enter tracking number

John Shipper,

Welcome to your personal Shipping Site

Shipping Log

DISPLAY: All Packages

SHIP TO Tom Mounsey

IN TRANSIT (M A6QWUQ HV3312)

2110

2112

2116

2117

2118

2121

2122

2123

2124

2125

2126

2127

2128

2129

2130

2170

Update View

Sort By: Company

SHIP DATE DELIVERY DATE

12/8/99

No Guarantee Time

DETAILS

Delete

FIG. 81

XXXXX.com - Your Favorite Browser

File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print Edit

Address

Home

My Tracking

Shipping Log

View Inbound Pkgs.

Add Inbound Package

Tracking Preferences

Log Off

QuickTrack

Enter tracking number

Home

Sell It

Ship It

Track It

Help

iship.com

Summary

Status as of 12/10/99 at 10:22 AM Pacific Standard Time 2140

# 128595610344113190 2141

Service:

UPS Ground

2128 } 2127

Status:

Tracking No.: 128595610344113190 2080

Shipped: Thursday, June 10, 1999 2147

Delivered: Friday, June 11, 1999 2074

Time: 08:30 2075

Signed By: Chris 2077

Delivered To: Bellevue, WA US 2073

Location: RECEIVER 2076

Last Scan: 5/11/99 8:30:00 AM DELIVERY } 2072

REDMOND, WA US

Recipient:

UNAVAILABLE

2149

Return Address:

UNAVAILABLE

2150

Package will be shipped from:

UNAVAILABLE

2153

Tracking

Internet

FIG. 82

---

**COMBINED DECLARATION AND POWER OF ATTORNEY  
FOR PATENT APPLICATION**

---

As a below named inventor, I hereby declare that:

**TYPE OF DECLARATION**

This declaration is for an original application.

**INVENTORSHIP IDENTIFICATION**

My residence, post office address and citizenship are as stated below, next to my name. I believe that I am an original, first and joint inventor of the subject matter that is claimed, and for which a patent is sought on the invention entitled:

**TITLE OF INVENTION**

APPARATUS, SYSTEMS AND METHODS FOR ONLINE, MULTI-CARRIER, MULTI-SERVICE  
PARCEL SHIPPING MANAGEMENT DETERMINATION OF RATABLE WEIGHT FOR  
MULTIPLE CARRIERS

**SPECIFICATION IDENTIFICATION**

The specification is attached hereto.

**ACKNOWLEDGMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR**

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information, which is material to patentability as defined in 37, Code of Federal Regulations, Section 1.56(a).

**CLAIM FOR BENEFIT OF PRIOR U.S. PROVISIONAL APPLICATION(S)**  
(35 U.S.C. Section 119(e))

I hereby claim the benefit under Title 35, United States Code, Section 119(e) of any United States provisional application(s) listed below:

0962507-10000



[illegible]**FILING DATE**

60/158,179  
60/170,186  
60/170,504  
60/192,692  
60/192,723  
60/193,899  
60/195,748

October 6, 1999  
December 10, 1999  
December 13, 1999  
March 28, 2000  
March 27, 2000  
March 31, 2000  
April 6, 2000

## POWER OF ATTORNEY

I hereby appoint Marilyn R. Khorsandi, Patent Bar Registration Number 45,744, and all members of the Bar who are attorneys with, or patent agents of, the law firm KHORSANDI PATENT LAW GROUP, A Law Corporation, as principal attorneys with power to appoint associate attorneys, to prosecute and transact all business in the Patent and Trademark Office connected with this application.

The authority under this Power of Attorney of each person identified above shall automatically terminate and be revoked upon such person ceasing to be a member, associate or patent agent of or of counsel to that law firm.

SEND CORRESPONDENCE TO

Marilyn R. Khorsandi  
140 S. Lake Ave., Suite 312  
Pasadena, CA 91101  
U.S.A.

**DIRECT TELEPHONE CALLS TO:**

**Marilyn R. Khorsandi**  
626-796-2856

Reg. Number 45,744

## DECLARATION

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

**SIGNATURES**

First named inventor	Inventor's Signature	Date
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■■■■■■■

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Residence and Post Office address		Citizenship
23029 NE 18 <sup>th</sup> Street, Redmond, Washington 98053		

MRK/crb  
pstm0020dec&power